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ELEVENTH ANNUAL ISSUE

N

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The *International Catalogue of Scientific Literature* is in effect a continuation of the Royal Society's *Catalogue of Scientific Papers* which will, when completed, consist of an Author Catalogue and Subject Index covering the period of 1800-1900. Twelve quarto volumes of the Author Catalogue covering the period 1800-1883 have already been published; the volumes for 1884-1900 are in course of preparation. The Subject Index will be issued separately for each of the seventeen sciences dealt with in the *International Catalogue of Scientific Literature*, and will be arranged in accordance with its Schedules. The volumes for Pure Mathematics and Mechanics are published. The Subject Index for Physics is in preparation.

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THE
ZOOLOGICAL RECORD

VOLUME THE FORTY-EIGHTH

BEING

RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1911

COMPILED BY THE REGIONAL BUREAUX OF THE INTERNATIONAL CATALOGUE OF
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Explore solum : sic fit via certior ultrà.

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M.DCCCXII

Papers and Memoirs intended for this work should be addressed to "THE EDITOR of the Zoological Record, Zoological Society, Regent's Park, London, N.W." It is earnestly requested that in the case of separately-printed copies of papers so forwarded, the *original pagination* may be indicated.

EXPLANATORY.

This Volume is printed in twenty Divisions, as enumerated on p. xii.

The pagination of each Division is separate, and is given at the left-hand top corner of the pages. The number and name of the Division is given as a heading on each left-hand page. The Registration Numbers are given at the right-hand top corner of the right-hand pages. The date 1911 corresponding to the bulk of the literature indexed is given at the right-hand top corner of the left-hand page.

In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

A List of Abbreviations of Titles of Journals is given at the end of the volume. This List includes not only journals actually indexed in this volume, but also journals that have been indexed in previous volumes. It should therefore be a fairly complete List of Journals that contain Zoological papers.

The Literature indexed is mainly that of 1911 but includes entries for 1901-1910 that have been received too late for inclusion in previous volumes of the International Catalogue.

The two title-pages show that Volume N (Zoology) of the Eleventh annual issue of the International Catalogue of Scientific Literature and Volume XLVIII of the Zoological Record are identical.

The proposal for an amalgamation of the Zoological Record with Volume N of the International Catalogue was approved by the International Convention which met in London in July, 1905. The agreement concluded with the Zoological Society of London provides that the amalgamation shall be for a period of five years, covering the literature of 1906-1910; at the end of this period each party to the agreement may resume the independent issue of its annual volumes, preserving the continuity of its series.

Subscribers to the Zoological Record will receive the volumes bound uniformly with previous volumes of the Record, while subscribers to the International Catalogue will receive their volumes in covers uniform with other volumes of the Catalogue.

The Schedules of Classification are bound up with the volumes intended for subscribers to the International Catalogue, but are absent from the volumes bound uniform with the Zoological Record.

The volume is arranged in accordance with these Schedules, but in one or two instances, notably in the case of Section XII Insecta, the Editor has adopted a modified arrangement.

CONTENTS.

- I. COMPREHENSIVE AND GENERAL ZOOLOGY.
- II. PROTOZOA.
- III. PORIFERA OR SPONGIAE.
- IV. COELENTERATA.
- V. ECHINODERMATA.
- VI. VERMIDEA: including GEPHYREA AND PTEROBRANCHIATA.
- VII. BRACHIOPODA AND BRYOZOA OR POLYZOA.
- VIII. MOLLUSCA.
- IX. ARTHROPODA (GENERAL).
- X. CRUSTACEA.
- XI. ARACHNIDA AND MYRIOPODA; including also GIGANT-OSTRACA, EURYPTERIDA, PROTOTRACHEATA.
- XII. INSECTA.
- XIII. PROCHORDATA = TUNICATA, CEPHALOCHORDATA, ENTEROPNEUSTA.
- XIV. VERTEBRATA (GENERAL).
- XV. PISCES.
- XVI. REPTILIA AND BATRACHIA.
- XVII. AVES.
- XVIII. MAMMALIA.

ALPHABETICAL INDEX OF NEW NAMES OF GENERA AND SUBGENERA.

LIST OF ABBREVIATIONS AND OF TITLES OF JOURNALS.

International Catalogue of Scientific Literature

SCHEDULE
OF
CLASSIFICATION

(N) ZOOLOGY

(N) ZOOLOGY.

EXPLANATORY.

OWING to the great extent of Zoology, and the consequent specialisation that occurs amongst its workers, and because also of the desire that parts of the Zoological Catalogue shall be complete each one in itself, Zoology is divided into "Branches." These Branches, though primarily determined by the natural divisions of the animal kingdom, do not entirely correspond therewith, because of the great difference in the extent of the natural divisions. Some of these divisions (Phyla, or Classes) are consequently treated together, while others are divided into more than one Branch. When a division of this kind is adopted, there is also a Branch in which the divisions are still treated together as one whole, viz., Arthropoda, 2400-2431, and Vertebrata, 5200-5231. These two Branches will include only works of a wide scope. Thirty Branches are adopted, under the numbers 0400 to 6031, and there is also a comprehensive Branch numbered 0000-0231.

The subject matter of Zoology proper (as distinguished from the mode of arrangement of the animals alluded to above) is arranged under eight heads (or great Subjects). These eight Subjects all recur under each of the thirty Branches. Each Subject is indicated by a number, the terminal two digits of which are the same in every Branch. These great subjects will be found under 0207 to 0231.

Each great subject is divided into sub-divisions which are not numbered.

(N) ZOOLOGIE.

ERLÄUTERUNG.

BEI dem grossen Umfange der Zoologie und bei der hieraus sich ergebenden Specialisierung unter ihren Forschern, und ferner, weil der Wunsch besteht, dass einzelne Teile der zoologischen Bibliographie ein in sich geschlossenes Ganzes darstellen möchten, ist es als notwendig befunden, die Zoologie nach „Zweigen“ abzuteilen.

Diese Zweige sind zwar in erster Linie nach den natürlichen Gruppen des Tierreichs bestimmt, entsprechen ihnen aber doch nicht völlig, da der Umfang der einzelnen natürlichen Gruppen zu verschieden ist.

Demgemäss sind einzelne dieser Gruppen (Phyla oder Klassen) mit einander zusammengefasst, während andere in mehrere Zweige geteilt sind. In den Fällen, wo eine solche Teilung vorgenommen ist, giebt es auch einen Zweig, in dem die betreffende Gruppe ungeteilt als Ganzes behandelt wird, nämlich Arthropoden, 2400-2431 und Vertebraten, 5200-5231. Diese beiden Zweige sollen nur Werke allgemeinerer Art enthalten. Im ganzen sind unter Nummer 0400 bis 6031 dreissig Zweige angenommen und dazu kommt noch ein alles umfassender, unter Nummer 0000 bis 0231.

Der sonstige Stoff der Zoologie (im Unterschied von der Art der Anordnung der Tiere, von der bisher die Rede war) ist auf acht Kapitel (oder Hauptgegenstände) verteilt. Diese acht Gegenstände kehren bei jedem der dreissig Zweige wieder. Jeder Gegenstand ist durch eine Nummer bezeichnet, deren letzte beide Ziffern in allen Zweigen die gleichen sind.

Diese Hauptgegenstände findet man unter 0207 bis 0231.

Jeder Hauptgegenstand ist in Unterabteilungen geteilt, die nicht numeriert sind.

(N) ZOOLOGIE.

EXPLICATION.

ETANT donnée d'une part la grande extension de la Zoologie, qui force les adeptes de cette science à se spécialiser, et d'autre part la nécessité de rendre les diverses parties du Catalogue zoologique indépendantes les unes des autres, et aussi complètes que possible, on a jugé nécessaire de diviser la Zoologie en un certain nombre de "branches." Ces branches ont été établies autant que possible d'après les divisions naturelles du règne animal; toutefois elles ne correspondent pas toujours exactement à ces divisions, en raison des grandes différences qui existent dans l'étendue de celles-ci. Il en résulte que certaines divisions (phyla, ou embranchements) sont traitées ensemble, tandis que d'autres sont partagées en plusieurs branches. Dans ce dernier cas il y a ordinairement une branche qui traite l'ensemble d'un embranchement, par exemple, Arthropodes, 2400-2431, et Vertébrés, 5200-5231. Ces deux branches ne comprennent que des ouvrages traitant un sujet assez vaste. On a adopté trente branches, portant les indices 0400 à 6031. Il y a en outre une branche de généralités portant l'indice 0000-0231.

La Zoologie considérée en elle-même, indépendamment des subdivisions en groupes auxquelles il vient d'être fait allusion, est partagée en huit chapitres (ou grandes catégories de sujets). Ces huit catégories se répètent dans chacune des trente branches, et sont indiquées chacune par des nombres dont les deux derniers chiffres sont les mêmes dans toutes les branches. Elles se trouvent sous les indices 0207 à 0231. Chacune d'elles se partage en subdivisions qui ne portent pas d'indices spéciaux.

(N) ZOOLOGIA.

SPIEGAZIONI.

IN causa della grande estensione della zoologia, e della conseguente specializzazione che esiste tra i suoi cultori, e perchè è desiderabile che le parti del Catalogo zoologico siano complete ciascuna per sè stessa, si è trovato necessario dividere la zoologia in "rami." Questi rami, quantunque principalmente determinati dalle naturali divisioni del regno animale, non corrispondono interamente ad esse in causa della grande differenza nella estensione delle divisioni naturali. Alcune di queste divisioni (phyla, oppure classi) sono conseguentemente trattate insieme, mentre che altre sono divise in più di un ramo. Quando una divisione di questo genere è adottata, vi è anche un ramo nel quale le divisioni sono tuttavia trattate insieme come un complesso, p. es. Arthropoda, 2400-2431, e Vertebrata, 5200-5231. Questi due rami includeranno soltanto opere di largo soggetto. Trenta rami sono adottati, sotto i numeri 0400 a 6031, e inoltre è incluso un ramo comprensivo col numero 0000-0231.

La materia della zoologia comprensiva (distinta da quelli dei gruppi degli animali qui sopra accennati) è disposta sotto otto capitoli (o grandi soggetti). Questi otto soggetti tutti si ripetono in ognuno dei trenta rami. Ciascun soggetto è indicato da un numero, del quale le due ultime cifre sono le stesse in ciaschedun ramo. Questi grandi soggetti si trovano sotto i numeri da 0207 a 0231. Ciascun grande soggetto è diviso in sottodivisioni, che non sono numerate.

INSTRUCTIONS.

The registration numbers used in Zoology consist of four figures, of which the first two indicate the taxonomic position of the animal or animals dealt with and the last two the heading under which the paper is to be indexed.

Thus, in the registration number 2611 the figures 26 indicate *Crustacea*, while the figures 11 denote *Physiology*. All registration numbers beginning with 26 refer to Crustacea, and all registration numbers ending in 11 show that the paper indexed deals with a physiological subject.

The meaning to be assigned to the last two figures is always that given in the following list:—

- ..00 Title slip.
- ..03 Comprehensive and General Works.
(For sub-divisions see *Hyperzoology* p. 18.)
- ..07 Structure. (For sub-divisions see 0207.)
- ..11 Physiology. (For sub-divisions see 0211.)
- ..15 Development. (For sub-divisions see 0215.)
- ..19 Ethology. (For sub-divisions see 0219.)
- ..23 Variation and Aetiology. (For sub-divisions see 0223.)
- ..27 Geography. (For sub-divisions see (J) Geography.)

..31 Taxonomy.

The meaning of the first two figures is as follows:—

- 02.. General papers, or papers dealing with several classes of animals.
- 04.. Protozoa.
- 06.. Porifera (or Spongida).
- 08.. Coelenterata (or Cnidaria).
- 10.. Echinodermata.
- 12.. Platyhelminthes. Mesozoa and Trichoplax.
- 14.. Nemathelminthes.
- 16.. Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera).
- 18.. Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

INSTRUKTIONEN.

Die in der Zoologie gebrauchten Ordnungsnummern bestehen aus vier Ziffern, von denen die beiden ersten die taxonomische Stellung des oder der behandelten Tiere anzeigen, während die letzten die Art der Behandlung angeben. So bedeutet z. B. in der Ordnungsnummer 2611 die 26 Crustacea, die 11 aber Physiologie. Die mit 26 beginnenden Ordnungsnummern beziehen sich also auf Crustacea, und alle Ordnungsnummern auf 11 geben an, dass die katalogisierte Arbeit sich mit einem physiologischen Gegenstande befasst.

Die Bedeutung der letzten beiden Ziffern ergibt sich aus folgender Liste:—

- Titel-Zettel.
- Umfassende und allgemeine Arbeiten. (Unterabteilungen siehe *Hyperzoologie* p. 18.)
- Morphologie. (Unterabteilungen siehe 0207.)
- Physiologie. (Unterabteilungen siehe 0211.)
- Entwicklung. (Unterabteilungen siehe 0215.)
- Ethologie. (Unterabteilungen siehe 0219.)
- Variation und Ätiologie. (Unterabteilungen siehe 0223.)
- Geographische Verbreitung. (Unterabteilungen siehe (J) Geographie.)

Taxonomie.

Die ersten beiden Ziffern bedeuten Folgendes:—

- Allgemeine, oder auf mehrere Tierklassen bezügliche Arbeiten.
- Protozoa.
- Porifera (oder Spongida).
- Coelenterata (oder Cnidaria).
- Echinodermata.
- Platyhelminthes. Mesozoa und Trichoplax.
- Nemathelminthes.
- Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).
- Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

INSTRUCTIONS.

(ISTRUZIONI).

Les numéros enregistreurs employés en zoologie comprennent quatre chiffres, dont les deux premiers indiquent la position taxonomique de l'animal ou des animaux en question, tandis que les deux derniers indiquent la rubrique sous laquelle le mémoire doit être classé.

Ainsi, dans le numéro enregistreur 2611 les chiffres 26 indiquent Crustacés, pendant que les chiffres 11 signifient Physiologie. Tout numéro enregistreur qui commence par 26 se rapporte aux Crustacés, de même que tout numéro enregistreur en 11 indique que le mémoire dont il est question s'occupe de physiologie.

La signification des deux derniers chiffres est toujours celle qui est donnée dans la liste suivante:—

- ..00 Fiche de titre.
- ..03 Ouvrages généraux ou d'une grande étendue. (Pour les subdivisions voy. Hyperzoologie p. 19.)
- ..07 Morphologie. (Pour les subdivisions voy. 0207.)
- ..11 Physiologie. (Pour les subdivisions voy. 0211.)
- ..15 Développement. (Pour les subdivisions voy. 0215.)
- ..19 Ethologie. (Pour les subdivisions voy. 0219.)
- ..23 Variation et étiologie. (Pour les subdivisions voy. 0223.)
- ..27 Distribution géographique. (Pour les subdivisions voy. (J) Géographie.)
- ..31 Taxonomie.

La signification des deux premiers chiffres est comme suit:—

- 02.. Mémoires généraux ou ayant trait à plusieurs classes d'animaux.
- 04.. Protozoaires.
- 06.. Porifères (ou Spongiaires).
- 08.. Cœlentérés (ou Cnidaria).
- 10.. Echinodermes.
- 12.. Platyhelminthes. Mésozoaires et le Trichoplax.
- 14.. Nématelminthes.
- 16.. Chætognathes. Rotifères. Gastrotriches. Kinorhynques (ou Echinodères).
- 18.. Archiannélides. Polychètes. Myzostomes. Oligochètes. Géphyriens. Phoronis. Hirudinées.

I numeri di registrazione adoperati nella zoologia consistono di quattro cifre, delle quali le due prime indicano la posizione tassonomica dell'animale o degli animali di cui si tratta, mentre che le due ultime indicano la rubrica sotto la quale si ha da catalogare la memoria. Così, nel numero di registrazione 2611 le cifre 26 indicano *Crustacea*, mentre che le cifre 11 si riferiscono alla *Fisiologia*. Ogni numero di registrazione che comincia con 26 si riferisce ai *Crustacea*, e da ogni numero che termina in 11 si può inferire che la memoria catalogata si occupa di fisiologia.

Le due ultime cifre hanno invariabilmente la significazione che si vede nell'elenco seguente:—

- Scheda a titolo.
- Opere generali e comprensive. (Per le suddivisioni vedi *Iperzoologia* p. 19.)
- Struttura. (Per le suddivisioni vedi 0207.)
- Fisiologia. (Per le suddivisioni vedi 0211.)
- Sviluppo. (Per le suddivisioni vedi 0215.)
- Etiologia. (Per le suddivisioni vedi 0219.)
- Variatione ed Etiologia. (Per le suddivisioni vedi 0223.)
- Geografia. (Per le suddivisioni vedi (J) *Geografia*.)

Tassonomia.

Le due prime cifre hanno sempre la significazione seguente:—

- Lavori generali o riferentisi a più classi di animali.
- Protozoa.
- Porifera (vel Spongida).
- Cœlenterata (vel Cnidaria).
- Echinodermata.
- Platyhelminthes. Mesozoa e Trichoplax.
- Nematelminthes.
- Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (vel Echinodera).
- Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyræa. Phoronis. Hirudinea.

- 20.. Brachiopoda. Bryozoa (or Polyzoa).
 22.. Mollusca.
 24.. Arthropoda.
 26.. Crustacea.
 28.. Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.
 30.. Arachnida.
 32.. Prototracheata (or Onychophora).
 34.. Myriopoda.
 35.. Insecta.
 36.. Aptera (or Apterygogenea). Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).
 38.. Orthoptera, Neuroptera and Trichoptera.
 40.. Hemiptera (or Rhynchota), excluding Anoplura, which are placed in 36..
 42.. Diptera, excluding Siphonaptera, which are placed in 36..
 44.. Lepidoptera.
 46.. Hymenoptera.
 48.. Coleoptera, including Strepsiptera.
 50.. Prochordata: Amphioxus (or Leptocardii), Enteropneusta, Tunicata.
 52.. Vertebrata.
 54.. Pisces, excluding Leptocardii (or Amphioxus), which are placed in 50..
 56.. Amphibia and Reptilia.
 58.. Aves.
 60.. Mammalia.

In addition to the complete volume it is intended to issue as three separate parts sections 12.. to 18.. (Vermidea); 28.. to 34..; and 35.. to 48.. (Hexapoda). Each of the remaining sections will then be published as a separate part.

Slips or Cards used in preparing the Volume.

Four kinds of slips are to be provided:—(1) Title slips, (2) Subject slips, (3) Systematic (Taxonomic) slips, (4) New Genera or Species slips. The several slips relating to the same paper should be tied together, and should have a common (arbitrary) number. This number must not be used for any other paper until two years have

- Brachiopoda. Bryozoa (oder Polyzoa).
 Mollusca.
 Arthropoda.
 Crustacea.
 Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.
 Arachnida.
 Prototracheata.
 Myriopoda.
 Insecta.
 Aptera (oder Apterygogenea). Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).
 Orthoptera, Neuroptera und Trichoptera.
 Hemiptera (oder Rhynchota), excl. Anoplura, die unter 36 .. eingeordnet sind.
 Diptera, excl. Siphonaptera, die unter 36.. eingeordnet sind.
 Lepidoptera.
 Hymenoptera.
 Coleoptera, incl. Strepsiptera.

- Prochordata: Amphioxus (oder Leptocardii), Enteropneusta, Tunicata.
 Vertebrata.
 Pisces, excl. Leptocardii (oder Amphioxus), die unter 50 .. eingeordnet sind).
 Amphibia und Reptilia.
 Aves.
 Mammalia.

Es wird beabsichtigt, ausser dem Gesamtbande noch drei separate, aus folgenden Abschnitten bestehende Teile herauszugeben: 12.. bis 18.. (Vermidea); 28.. bis 34..; und 35.. bis 48.. (Hexapoda). Jeder der übrigen Abschnitte wird dann auch separat herausgegeben.

Zettel zur Vorbereitung des Bandes.

Es müssen vier verschiedene Zettel hergestellt werden:—(1) Titel-Zettel, (2) Sach-Zettel, (3) System-(Taxonomie-) Zettel, (4) Zettel für neue Gattungen oder Arten. Die verschiedenen, auf dieselbe Arbeit bezüglichen Zettel sollen zusammengeheftet und mit einer gemeinsamen (willkürlichen) Nummer versehen werden. Vor Ablauf von zwei

20..	Brachiopodes.	Bryozoaires (ou Polyzoaires).	Brachiopoda.	Bryozoa (vel Polyzoa).
22..	Mollusques.		Mollusca.	
24..	Arthropodes.		Arthropoda.	
26..	Crustacés.		Crustacea.	
28..	Trilobites.	Xiphosures. Eury- ptérides. Pantopodes. Tardi- grades. Linguatulides.	Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Lingua- tulida.	
30..	Arachnides.		Arachnida.	
32..	Prototrachéates (ou Onychophores).		Prototracheata (vel Onychophora).	
34..	Myriapodes.		Myriopoda.	
35..	Insectes.		Insecta.	
36..	Aptères (ou Aptérygogéniens). Anoploures. Mallophages. Thisanoptères (ou Physopodes). Siphonaptères (ou Aphaniptères).		Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphaniptera).	
38..	Orthoptères, Névroptères et Trichoptères.		Orthoptera, Neuroptera et Trichoptera.	
40..	Hémiptères (ou Rhynchotes), à l'exclusion des Anoploures, qui sont placés sous le numéro 36..		Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 36..	
42..	Diptères, à l'exclusion des Siphonaptères, qui sont placés sous le numéro 36..		Diptera, esclusi Siphonaptera, che sono indicati col numero 36..	
44..	Lépidoptères.		Lepidoptera.	
46..	Hyménoptères.		Hymenoptera.	
48..	Coléoptères, y compris les Strepsiptères.		Coleoptera, incl. Strepsiptera.	
50..	Prochordés: Amphioxus (ou Leptocardiens) Entéropneustes, Tuniciers.		Prochordata: Amphioxus (vel Leptocardii), Enteropneusta, Tuniciata.	
52..	Vertébrés.		Vertebrata.	
54..	Poissons, à l'exclusion des Leptocardiens (ou Amphioxus), qui sont placés sous le numéro 50..		Pisces, escl. Leptocardii (vel Amphioxus), i quali sono indicati col numero 50..	
56..	Batraciens et Reptiles.		Batrachia et Reptilia.	
58..	Oiseaux.		Aves.	
60..	Mammifères.		Mammalia.	

Outre le volume complet, l'on se propose de publier en trois volumes à part les sections 12.. à 18.. (Vermidés); 28.. à 34..; et 35.. à 48.. (Hexapodes). Puis chacune des sections suivantes sera aussi publiée à part.

Oltre il tomo completo si ha l'intenzione di pubblicare in tre parti separate le sezioni 12.. a 18.. (Vermidea); 28.. a 34..; e 35.. a 48.. (Hexapoda). Ciascuna delle rimanenti sezioni verrà poi anche pubblicata separatamente.

Rédaction des Fiches.

Il doit y avoir quatre sortes de fiches, savoir:—(1) Fiches de titre, (2) Fiches de matière, (3) Fiches systématiques (taxonomiques), (4) Fiches pour les genres ou espèces nouvelles. Toutes les fiches qui se rapportent au même mémoire doivent être attachées ensemble et marquées d'un numéro en commun (arbitraire). Ce numéro ne

Redazione delle Schede.

Devono farsi quattro specie di schede:—(1) Schede a titolo, (2) Schede a materia, (3) Schede sistematiche (tassonomiche), (4) Schede per i generi o le specie nuove. Tutte le schede riferentisi al medesimo lavoro devono essere attaccate insieme e segnate con un numero commune (arbitrario). Questo numero non è da usa si

elapsed. The slips should be prepared as follows:—

(1) *Title slips*.—The first entry on a title slip is the letter N, followed by a four-figure registration number, in which the first two figures indicate the Branch of zoology as given in the above list, while the two last figures are ..00. The remaining entries on the title slips are to be made as on the author slips for the other sciences.

At the foot of each title slip all the registration numbers corresponding to the subject and systematic slips prepared for the paper are to be given. If a paper is to be indexed under more than one Branch of zoology a separate title slip must be prepared for each Branch.

Example—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

In order to economise space and to simplify entries, the full reference to a paper will be made only on the title and systematic slips. Each title slip will be printed in the Catalogue with a definite number attached. This number, together with the author's name, will be the reference to the paper in all other cases.

(2) *Subject Slips*.—The entries on the subject slips shall not, as a rule, be reproductions of the title, but such modifications thereof as shall serve to convey the necessary information in the clearest and most direct manner possible.

To prepare such slips properly it is essential that the papers shall have been read and indexed by those who are able to determine what are the several matters of importance to be brought under notice.

In the case of slips bearing the numbers 0000-0050, 0070 and 0090,

Jahren darf keine andere Arbeit mit derselben Nummer bezeichnet werden.

(1) *Titel-Zettel*.—Die erste Eintragung auf einem Titel-Zettel ist der Buchstabe N, worauf eine vierziffrige Ordnungsnummer folgt wovon die zwei ersten Ziffern den Zweig der Zoologie bezeichnen, wie in obiger Liste angegeben, während die zwei letzten Ziffern ..00 sind. Die übrigen Eintragungen auf dem Titel-Zettel sind in derselben Weise abzufassen wie bei den Autoren-Zetteln in den anderen Wissenschaften.

Am Fusse eines jeden Titel-Zettels müssen sämtliche, den für die betreffende Arbeit hergestellten Sach- und System-Zetteln entsprechende, Ordnungsnummern angegeben werden. Soll ein Aufsatz unter mehr als einem Zweige der Zoologie katalogisiert werden, so ist für jeden Zweig ein besonderer Titel-Zettel herzustellen.

Beispiel—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Um Raum zu ersparen und die Eintragungen zu vereinfachen kommt das vollständige Citat nur auf die Titel- und System-Zettel. Jedem im Kataloge gedruckten Titel-Zettel wird eine bestimmte Nummer zugeteilt. Diese Nummer, mit dem Verfassernamen, bildet in allen anderen Fällen das Citat.

(2) *Sach-Zettel*. — Die Eintragungen auf den Sach-Zetteln sollen in der Regel keine Wiederholungen des Titels sein, sondern solche Modifikationen desselben, dass sie die erforderliche Auskunft so kurz und bündig wie möglich erteilen.

Für die richtige Fassung solcher Zettel ist es von Wichtigkeit, dass die Aufsätze von Personen gelesen und katalogisiert werden, welche imstande sind das Wichtige darin zu erkennen und hervorzuheben.

Bei Zetteln, welche die Nummern 0000-0050, 0070 und 0090 tragen,

doit être employé pour aucun autre mémoire qu'au bout de deux ans. Voici comment il faut rédiger les fiches :—

(1) *Fiches de titre.*—La fiche de titre doit commencer par la lettre N, suivie d'un numéro enregistreur de quatre chiffres, dont les deux premiers indiquent la branche de zoologie d'accord avec la liste ci-dessus, tandis que les deux dernières sont 00. Ensuite la fiche de titre sera établie de la même façon que les fiches d'auteur pour les autres sciences.

Chaque fiche de titre doit porter en bas tous les numéros enregistreurs qui correspondent aux fiches de matière et systématiques qui aient été rédigées pour le mémoire dont il s'agit. Si un mémoire doit être catalogué sous plus d'une branche de zoologie il faut une fiche séparée pour chaque branche.

Exemple—

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Pour gagner de la place et simplifier les articles, la référence ne sera donnée en entier que sur les fiches de titre et les fiches systématiques. Chaque fiche de titre sera imprimée dans le Catalogue et désignée par un numéro. Ce numéro, avec le nom d'auteur, servira de renvoi à l'article partout ailleurs.

(2) *Fiches de matière.*—Règle générale, la fiche de matière doit porter non pas une reproduction du titre mais de telles modifications du titre qui suffisent à donner les renseignements nécessaires de la manière la plus précise.

Afin que de telles fiches soient bien établies il est essentiel que les mémoires aient été lus et catalogués par des personnes à même de déterminer quelles sont les choses d'importance à faire ressortir. Là où il s'agit de fiches portant les numéros 0000-0050, 0070 et 0090, le

per nessun altro lavoro prima che siano scorsi due anni. Le schede devono essere redatte come segue :—

(1) *Schede a titolo.*—La scheda a titolo deve cominciare colla lettera N, seguita da un numero di registrazione di quattro cifre di cui le due prime indicano il ramo di zoologia d'accordo coll'elenco dissopra, mentre che le due ultime sono . . 00. Le altre annotazioni sulla scheda a titolo si fanno poi come sulle schede per autori nelle altre scienze.

La scheda a titolo deve portare in fondo tutti i numeri di registrazione corrispondenti colle schede sistematiche ed a materia che si siano preparate per il lavoro di cui si tratta. Se si vuol catalogare un lavoro sotto più d'un ramo di zoologia bisogna fare una scheda separata per ogni ramo.

Esempio—

N 6000.

Mansion, Arthur. La taupe commune. Rev. Sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Per risparmiare lo spazio e ridurre al più semplice le annotazioni, la riferenza non verrà scritta per esteso che sulle schede a titolo e le schede sistematiche. Ogni scheda a titolo si stamperà nel Catalogo con un numero definito. Questo numero, assieme al nome dell'autore, costituirà la riferenza al lavoro in ogni altro caso.

(2) *Schede a materia.*—Le annotazioni sulle schede a materia non saranno, di regola, ripetizioni del titolo, ma saranno tali modificazioni di questo che bastino a dare le informazioni necessarie nel modo più perspicuo che sia possibile.

Perchè tali schede siano ben redatte è essenziale che le memorie siano state lette e catalogate da persone che possano determinare quali sono le cose importanti da far risaltare.

Trattandosi di schede portanti i numeri 0000-0050, 0070 e 0090, il

the author's name should immediately follow the registration number.

Example—

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

This should be attached to the title slip and abbreviated thus:—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313).

In cases in which it is desirable, for other purposes which the Bureau may have in contemplation, to enter the full reference on the slip, the shortened reference will be made at the Central Bureau by striking out unnecessary particulars.

On slips bearing a number ending in .27 (Geographical Distribution) the registration number should be immediately followed by the geographical symbol. After this should come (a) the author's name, (b) the title of the paper.

Example—

N 2227 *hc*.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

which, if the above directions are followed, will be reduced to—

N 2227 *hc*.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

The remaining registration numbers, viz., 0060, and those ending in .03, .07, .11, .15, .19, and .23, are divided into numerous sub-headings. One of these sub-headings should follow the registration number.

A separate card must be provided for each entry that is to appear separately in the Catalogue.

In cases in which entries cannot be included under existing subdivisions, and for which a new sub-

muss der Verfassersname unmittelbar auf die Ordnungsnummer folgen.

Beispiel—

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

Dieser Zettel müsste an den Titel-Zettel geheftet und wie folgt abgekürzt werden:—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313.)

Falls es den Bureau, zu irgend einem von ihnen beabsichtigten Zwecke, wünschenswert erscheint, das vollständige Citat beizubehalten, so wird das Centralbureau durch Streichen des Überflüssigen dasselbe abkürzen.

Bei Zetteln, welche eine Nummer auf .27 tragen (geographische Verbreitung) muss das geographische Symbol unmittelbar auf die Ordnungsnummer folgen. Dann kommt (a) der Verfassersname, (b) der Titel des Aufsatzes.

Beispiel—

N 2227 *hc*.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

was, obiger Vorschrift gemäss, abgekürzt so lautet:—

N 2227 *hc*.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Die übrigen Ordnungsnummern, namentlich 0060 und jene auf .03, .07, .11, .15, .19 und .23, sind in zahlreiche Unterabteilungen geteilt. Eine dieser Unterabteilungen muss auf die Ordnungsnummer folgen.

Jeder besonderen Eintragung im Kataloge muss ein besonderer Zettel entsprechen.

Falls die vorhandenen Unterabteilungen zur gehörigen Katalogisierung nicht hinreichen und

nom d'auteur doit suivre immédiatement le numéro enregistreur.

Exemple—

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

Ceci doit être attaché à la fiche de titre et abrégé ainsi :—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313).

Dans les cas où les bureaux régionaux, dans un but quelconque, désirent mettre la référence en entier sur la fiche, le Bureau Central en fera la référence abrégée en biffant les détails superflus.

Sur les fiches portant un numéro en ..27 (Distribution Géographique) le numéro enregistreur doit être suivi immédiatement du symbole géographique. Ensuite viendrait (a) le nom d'auteur, (b) le titre du mémoire.

Exemple—

N 2227 *he.*

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

Ce qui, conformément aux instructions ci-dessus, sera réduit à :—

N 2227 *he.*

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Les autres numéros enregistreurs, c.à.d. 0060 et ceux en ..03, ..07, ..11, ..15, ..19 et ..23, sont divisés en de nombreuses subdivisions. Une de ces subdivisions doit suivre le numéro enregistreur.

Il faut une fiche séparée pour chaque article qui doit paraître séparément dans le catalogue.

S'il se trouve que les subdivisions actuelles ne suffisent pas et qu'une nouvelle subdivision serait à désirer

nome dell'autore deve seguire immediatamente il numero di registrazione.

Esempio—

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

Questo si deve attaccare alla scheda a titolo ed abbreviare così :—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313).

Ove gli Uffici Regionali, a qualunque scopo, volessero annotare la riferenza sulla scheda per esteso, la riferenza abbreviata si farebbe dall'Ufficio Centrale col cancellare i dettagli soverchi.

Sulle schede portanti un numero in ..27 (Distribuzione Geografica) il numero di registrazione dev'essere seguito immediatamente dal simbolo geografico. Poi verrebbe (a) il nome dell'autore, (b) il titolo della memoria.

Esempio—

N 2227 *he.*

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

Giusto le suddette istruzioni questo si ridurrebbe a :—

N 2227 *he.*

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

I rimanenti numeri di registrazione, cioè 0060 e quelli in ..03, ..07, ..11, ..15 e ..23 sono divisi in numerose subdivisions. Una di queste subdivisions deve seguire il numero di registrazione.

Ci vuol una scheda separata per ogni articolo che deve apparire separatamente nel Catalogo.

Nel caso di articoli che non si possono includere nelle subdivisions attuali e per i quali si stima desidera-

division is thought to be desirable, such suggested new sub-division shall be recorded upon the card, in order that the matter may be dealt with by the Central Bureau. In no case must two differently numbered subjects be placed on one slip.

If the book or paper deals with so many of these sub-headings as to render it unnecessary to mention all of them, the word "general" should be used for the sub-heading. The sub-heading should be followed by (a) the author's name, (b) the title or modified title of the paper.

Example—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899–1900, 1901, (1–8).

If this card is sent to the Central Bureau tied to the corresponding title slip, it should be abbreviated, as explained above, to—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1–8).

(3) *Systematic slips*.—In these slips the name of the animal or animals should immediately follow the registration number. Where more than one genus is mentioned a separate slip must be prepared for each genus.

Every new genus must have a separate slip; the name of the new genus must be followed by the indication "n. gen.," a brief statement as to what it is allied to and some indication of the species it includes, followed by the author's name and reference.

New sub-genera are to be treated in a similar manner to genera, except that "n. subgen." will be used, and the name of the genus of which it is a division will follow.

eine neue Unterabteilung deshalb wünschenswert erscheint, so ist die vorgeschlagene neue Unterabteilung auf dem Zettel auszugeben, damit das Central-Bureau entscheide, wie dabei zu verfahren sei. Auf keinen Fall dürfen zwei verschieden numerierte Gegenstände auf einen Zettel gesetzt werden.

Bezieht sich das Buch, resp. der Aufsatz, auf so viele Unterabteilungen, dass es unzumutbar ist, sie alle anzuführen, so gebraucht man das Wort „Allgemeines“ für die Unterabteilung. Auf die Unterabteilung folgt (a) der Verfassersname, (b) der Titel, resp. der modifizierte Titel der Arbeit.

Beispiel—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899–1900, 1901, (1–8).

Wird dieser Zettel mit dem entsprechenden Titel-Zettel zusammengeheftet an das Central-Bureau geschickt, so ist er, wie oben erklärt, folgendermassen abzukürzen:—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1–8).

(3) *System-Zettel*.—Bei diesen Zetteln soll der Name des Tieres oder der Tiere unmittelbar auf die Ordnungsnummer folgen. Wird mehr als eine Gattung erwähnt, so ist für jede Gattung ein besonderer Zettel herzustellen. Jede neue Gattung muss einen besonderen Zettel erhalten; auf den Namen der neuen Gattung folgt die Bemerkung „n. gen.“, eine kurze Notiz, wem sie verwandt ist, und irgend eine Angabe über die Species, die sie umfasst; hierauf Verfassersname und Citat.

Neue Untergattungen sind ähnlich zu behandeln, wie Gattungen, nur dass die Bemerkung „n. subgen.“ gebraucht und der Name der Gattung, um deren Unterabteilung es handelt, hinzugefügt wird.

la nouvelle subdivision que l'on propose doit être indiquée sur la fiche afin que le Bureau Central décide comment il faut procéder. En aucun cas deux articles portant des numéros différents ne doivent être écrits sur la même fiche.

Dans le cas où le livre ou mémoire traite de tant de ces subdivisions qu'il est inutile de les citer toutes, il faut employer le mot "Généralités" pour la subdivision. La subdivision doit être suivie (a) du nom d'auteur, (b) du titre ou du titre modifié du mémoire.

Exemple—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Si cette fiche est envoyée au Bureau Central attachée à la fiche de titre correspondante elle doit être abrégée, comme il est expliqué ci-dessus, à :—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Fiches systématiques.*—Sur ces fiches le nom de l'animal ou des animaux doit suivre immédiatement le numéro enregistreur. Si mention est faite de plus d'un genre il faut une fiche distincte pour chaque genre.

Chaque genre nouveau doit avoir une fiche distincte ; le nom du genre nouveau doit être suivi de l'indication "n. gen.," puis d'une courte indication du genre ou des genres auxquels il est allié et de quelques indications relatives aux espèces qu'il renferme ; le tout sera suivi du nom d'auteur et de la référence.

Les sous-genres nouveaux seront traités de la même façon que les genres, mais l'indication "n. gen." sera remplacée par "n. subgen.," et l'on mettra ensuite le nom du genre auquel le sous-genre se rattache.

bile qualche nuova suddivisione, si deve annotare sulla scheda la nuova suddivisione proposta affinché l'Ufficio Centrale decida come si debba comportare con essa. In nessun caso si devono porre sulla stessa scheda due soggetti portanti numeri diversi.

Se il libro o la memoria si riferisce a tante di queste suddivisioni che non fa d'uopo accennarle tutte, allora si pone per la suddivisione la parola "generale." La suddivisione dev'essere seguita (a) dal nome dell'autore, (b) dal titolo, ossia dal titolo modificato, del lavoro.

Esempio—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Se questa scheda si manda all'Ufficio Centrale attaccata alla scheda a titolo corrispondente si deve abbreviare, come si è spiegato qui sopra, a :—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Schede sistematiche.*—Su queste schede il nome dell'animale o degli animali deve seguire immediatamente il numero di registrazione. Se si fa menzione di più di un genere bisogna far una scheda separata per ogni genere.

Ciascun nuovo genere deve avere una scheda separata ; il nome del nuovo genere dev'essere seguito dalla indicazione "n. gen.," poi viene una breve indicazione di quello cui esso si connette, e qualche indicazione delle specie che include, e segue infine il nome dell'autore e le referenze.

I nuovi sottogeneri saranno trattati in modo simile ai nuovi generi, ma sarà adoperata la indicazione "n. subgen.," e seguirà il nome del genere del quale il sottogenere è divisione.

The author's name should follow the title or modified title on these slips.

Examples—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374).
[Schizopoda.]

(II) N 4431.

Heterophrya neximargo sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457).
[Geometridae.]

When more than one new species is described from the same genus, all the new species should be mentioned on the slip and the respective page references given. Where only one new species is mentioned the slip should be arranged as in Example II. In any case the habitat should be given where possible.

At the end of each slip the name of the group of animals referred to should be given. When the work gives no indication of the group (i.e., Family, Sub-family or Tribe) and the slip-maker cannot from his own knowledge supply the deficiency the sign [?] may be written at the end of the slip.

When it is undesirable to index each genus separately a general entry should be given.

Example—

N 4431.

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.).
[Noctuidae.]

On systematic slips Christian names should be represented by initials only.

Slips relating to fossil forms are to be marked †, and slips relating to fossil and recent forms †*. (The latter condition occurs only rarely in this division.)

Bei diesen Zetteln sollte der Verfassersname auf den Titel oder modifizierten Titel folgen.

Beispiele—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374).
[Schizopoda.]

(II) N 4431.

Heterophrya neximargo sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457).
[Geometridae.]

Wird mehr als eine neue Art derselben Gattung beschrieben, so sollen sämtliche neue Arten, mit Angabe der betreffenden Seiten-Zahlen, auf dem Zettel erwähnt werden. Wo es sich blos um eine neue Art handelt, ist der Zettel wie in Beispiel II herzustellen. Das Habitat ist auf jeden Fall wenn möglich anzugeben.

Am Ende eines jeden System-Zettels ist der Name der betreffenden Tiergruppe anzuführen. Enthält die Arbeit keine Angabe der Gruppe (d.h. Familie, Unterfamilie oder Tribus) und ist der Zettelschreiber nicht im stande, aus eigener Kenntniss die Lücke auszufüllen, so kann das Zeichen [?] an das Ende des Zettels gesetzt werden. Ist die gesonderte Angabe einer jeden Gattung nicht wünschenswert, so ist eine allgemeine Bezeichnung zu geben.

Beispiel—

N 4431

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.).
[Noctuidae.]

Auf den System-Zetteln sollen die Vornamen nur durch Anfangsbuchstaben wiedergegeben werden.

Zettel, die sich auf fossile Formen beziehen, sind durch ein † zu bezeichnen; solche, die sich sowohl auf fossile als auf recente Formen beziehen, durch ein †*. (Der letzte Fall kommt in diesem Abschnitt nur selten vor.)

Le nom d'auteur doit *suivre* le titre ou le titre modifié sur ces fiches.

Exemples—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

Heterophrya neximargo sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

Quand il y a description de plus d'une espèce du même genre, toutes les espèces nouvelles doivent être portées sur la fiche avec le renvoi aux pages respectives. S'il n'y a qu'une seule espèce nouvelle la fiche doit être établie conformément à l'exemple II. L'habitat doit être indiqué en tout cas si possible. L'on devra placer à la fin de chaque fiche systématique le nom du groupe d'animaux auquel la fiche se rapporte. Quand l'ouvrage ne fournit aucune indication de groupe (famille, sous-famille ou tribu) et lorsque le rédacteur de la fiche ne peut, d'après ses propres connaissances, suppléer à ce défaut d'indications, l'on pourra mettre le signe [?] à la fin de la fiche.

S'il n'est pas à désirer que chaque genre soit catalogué séparément il faut établir un article général.

Exemple—

N 4431.

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

Sur les fiches systématiques les noms de baptême doivent être représentés par des initiales seulement.

Les fiches relatives aux formes fossiles doivent être marquées †, et celles qui se rapportent aux formes fossiles récentes †*. (Cette dernière condition ne se présente que rarement dans cette division.)

Su queste schede il nome dell'autore deve venire *dopo* il titolo o titolo modificato.

Esempi—

(I) N 2631.

Amblyops crozetii, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

Heterophrya neximargo sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

Quando si descrive più di una specie nuova del medesimo genere, tutte le specie nuove devono venire accennate sulla scheda colla riferenza alle pagine rispettive. Trattandosi di una sola specie nuova, la scheda dev' essere redatta come in esempio II. In ogni caso, per quanto sia possibile, si deve menzionare il habitat.

Al fine di ciascuna scheda sistematica si deve porre il nome del gruppo di animali cui la scheda si riferisce. Quando il lavoro non porta indicazione del gruppo (cioè famiglia, sottofamiglia, tribù) e il redattore della scheda non può di suo supplire alla deficienza, si può mettere al fine della scheda il segno [?].

Quando non si vuole catalogare separatamente ogni genere, si farà un' annotazione generale.

Esempio—

N 4431.

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

I nomi di battesimo devono essere rappresentati sulle schede sistematiche colle sole iniziali.

Le schede relative a forme estinte saranno segnate †, e le schede relative a forme estinte e viventi †*. (L'ultima condizione occorre soltanto raramente in questa divisione.)

(4) *Lists of New Genera and Species.*—For the preparation of these lists, the Regional Bureaus should give the names of genera and sub-genera (a) which are new, (b) the significance of which has been changed, (c) which contain new species. These may be written at the foot of the systematic slips, but it would greatly facilitate an earlier production of the volume if the Regional Bureaus would write each new genus on a separate card and attach it to the systematic slip.

Date of Receiving Slips.

The period during which the material for any one year will be received at the Central Bureau will not extend beyond June of the following year. Regional Bureaus are therefore earnestly requested to complete the indexing of their zoological literature within the time named.

The period covered by the literature indexed in any one of the annual volumes shall be from January 1st to December 31st of the particular year, but any matter which had not been received in time for insertion in the previous volume shall also be included therein.

Distinctive Character of cards.

The editorial work will be greatly facilitated by ruling a red line near the left-hand edge of the title slips, a green line near the left-hand edge of the subject slips, and no line at all on the taxonomy and new species slips. Or the slips may be printed on thin card of three colours, viz., red for the title slips, green for the subject slips, and white for the systematic slips. The size of the slips must be 16 cm. by 8 cm.

(4) *Listen neuer Gattungen und Arten.*—Zur Herstellung dieser Listen sollten die Regionalbureaus die Namen der Gattungen und Untergattungen angeben, (a) die neu sind, (b) deren Bedeutung sich geändert hat, (c) die neue Arten enthalten. Diese können am Fusse der System-Zettel angeführt werden, es würde jedoch zur schnelleren Erscheinung des Bandes wesentlich beitragen, wenn die Regionalbureaus jede neue Gattung auf einem besonderen Zettel schrieben und diesen an den System-Zettel hefteten.

Termin des Empfangs der Zettel.

Das Material für irgend ein Jahr darf nicht später als Ende Juni des folgenden Jahres in den Besitz des Centralbureaus gelangen. Die Regionalbureaus werden daher dringend ersucht, mit dem Katalogisieren ihrer zoologischen Literatur bis zu dem genannten Termin fertig zu werden.

Die in irgend einem der jährlichen Bände veröffentlichte Litteratur soll die Periode vom 1. Januar bis zum 31. December des betreffenden Jahres decken, etwaige Artikel aber, die für den vorigen Band zu spät eintrafen, werden darin mit aufgenommen.

Markierung der Zettel.

Die Herausgabe wird bedeutend erleichtert werden, wenn auf den Titel-Zetteln nahe dem linken Rande eine rothe Linie, auf den Sach-Zetteln entsprechend eine grüne Linie gezogen wird, während die Taxonomie- und Arten-Zettel ohne Linie bleiben. Man kann auch die Zettel auf drei verschiedenfarbige Sorten Carton drucken, nämlich die Titel-Zettel auf roten, die Sach-Zettel auf grünen und die System-Zettel auf weissen.

Die Zettel müssen 16 × 8 cm. gross sein.

(4) *Listes des genres et espèces nouvelles.*—Pour la rédaction de ces listes les Bureaux Régionaux doivent donner les noms des genres et sous-genres (a) qui sont nouveaux, (b) dont la signification est changée, (c) qui contiennent des espèces nouvelles. Ils peuvent être écrits au pied des fiches systématiques, pourtant si les Bureaux Régionaux voulaient écrire chaque genre nouveau sur une fiche séparée et l'attacher à la fiche systématique, cela contribuerait beaucoup à accélérer la publication du volume.

(4) *Elenchi di Generi e Specie nuove.*—Per la redazione di questi elenchi gli Uffici Regionali devono dare i nomi dei generi e sottogeneri, (a) che sono nuovi, (b) il cui significato si è cambiato, (c) che contengono delle specie nuove. Questi possono essere scritti in fondo alle schede sistematiche, ma contribuirebbe molto ad accelerare la pubblicazione del tomo se gli Uffici Regionali scrivessero ogni genere nuovo sopra una scheda separata e attaccassero questa alla scheda sistematica.

Date de la réception des fiches.

La période pendant laquelle les matières pour une année quelconque seront admises par le Bureau Central ne s'étendra pas au-delà du mois de juin de l'année suivante. Aussi les Bureaux Régionaux sont-ils instamment priés de compléter l'index de leur littérature zoologique avant l'expiration de ce terme.

La littérature indexée dans un volume annuel quelconque comprendra la période du 1er janvier au 31 décembre de l'année en question, ainsi que les articles qui étaient arrivés trop tard pour être incorporés dans le volume précédent.

Caractère distinctif des fiches.

Le travail du Directeur sera grandement facilité si l'on trace une ligne rouge près du bord gauche des fiches de titre, une ligne verte près du bord gauche des fiches de matière, et si l'on ne trace aucune ligne sur les fiches systématiques et sur les fiches pour les espèces nouvelles. On peut aussi imprimer les fiches sur des cartons minces de trois couleurs, savoir, une carte rouge pour les fiches de titre, une carte verte pour les fiches de matière, et une carte blanche pour les fiches systématiques.

Les dimensions des fiches doivent être de 16 cm. sur 8 cm.

Data di ricezione delle schede.

Il periodo durante il quale il materiale per un anno qualunque sarà ammesso dall' Ufficio Centrale non si stenderà in là di Giugno dell'anno seguente. Gli Uffici Regionali sono perciò pregati con istanza di completare il catalogo della loro letteratura zoologica dentro del detto termine.

La letteratura catalogata in un tomo annuale qualunque comprenderà il periodo dal 1° Gennaio al 31 Dicembre dell' anno di cui si tratta, coll' aggiunto di quegli articoli che fossero ricevuti troppo tardi per essere inclusi nel tomo precedente.

Carattere distintivo delle schede.

Il lavoro dell' Ufficio Centrale sarà grandemente facilitato dal segnare il margine sinistro delle schede a titolo con una linea rossa, quello delle schede a soggetto con una verde, e dal lasciare senza linea le schede tassonomiche e quelle per le specie nuove. Oppure le schede potranno essere scritte su carta di tre colori, rosso, verde, e bianco, il primo per le schede a titolo, il secondo per quelle a soggetto, il terzo per quelle sistematiche.

Il formato delle schede devlessere di 16 per 8 centimetri di lato.

0000-0231. Comprehensive Zoology.

N.B.—The subjects enumerated under numbers 0000 to 0231 may recur in any one of the subsequent Branches. In the Catalogue only works that deal with several Branches will be registered under numbers 0000 to 0231; hence the term "Comprehensive Zoology."

HYPERZOOLOGY.

- 0000 Philosophy.
- 0010 History. Biography.
- 0020 Periodicals. Reports of Institutions, Societies, Congresses, Explorations.
- 0030 General Treatises, Text-books, Dictionaries, Collected Works, Tables.
- 0032 Bibliographies.
- 0040 Addresses, Lectures, etc., of a general character.
- 0050 Pedagogy.
- 0060 Institutions, Museums, Collections, Aquaria, Gardens, Utility and Harmfulness, Zoology in relation to Medicine, etc. (*See also* the general sections of Special Zoology.)
- 0070 Nomenclature (principles of).
- 0090 Technique. Methods of research, instruments and apparatus.
- 0207 STRUCTURE (OR MORPHOLOGY). [In general or of more than one of the classes of animals.] (*See also* (L) General Biology (O) Anatomy and (Q) Physiology.)

General; Comparative Anatomy; Special Anatomy and Histology: Tegument and its Organs; Nervous System and Organs of Sense; Myology; Skeleton (including Osteology and Dentition); Skeletal Structures of Invertebrates; Alimentary System; Circulatory and Respiratory Organs; Water Vascular System, Blood, Lymph, Cœlomic Fluid, Chyle. Special Glands; Excretory Organs; Reproductive Organs; Special External Characters; Colour. Rudimentary or Vestigial Organs, and Organs of uncertain nature.

0000-0231. Allgemeine Zoologie.

N.B.—Die unter Nr. 0000 bis 0231 aufgeführten Gegenstände können in jedem der nachfolgenden Zweige wiederkehren. Unter Nr. 0000-0231 bringt der Katalog nur solche Arbeiten, die mehrere Zweige behandeln. Daher der Ausdruck „Allgemeine Zoologie.“

HYPERZOOLOGIE.

- Philosophie.
- Geschichte. Biographien.
- Periodica. Berichte von Instituten, Gesellschaften, Kongressen, Forschungsreisen etc.
- Allgemeine Abhandlungen, Lehrbücher, Wörterbücher, Sammelwerke, Tabellen.
- Bibliographien.
- Festreden, Vorträge u.s.w., allgemeiner Art.
- Pädagogik.
- Institute, Museen, Sammlungen, Aquarien, Gärten, Nützlichkeit und Schädlichkeit, Zoologie in Beziehung zur Medizin etc. (*Siehe auch* die allgemeinen Abteilungen der speciellen Zoologie.)
- Nomenklatur (Prinzipien).
- Technik. Untersuchungsmethoden. Instrumente und Apparate.
- STRUKTUR (ODER MORPHOLOGIE). [Im allgemeinen oder von mehreren Tierklassen.] (*Siehe auch* (L) Allgemeine Biologie, (O) Anatomie und (Q) Physiologie.)
- Allgemeines; Vergleichende Anatomie; Spezielle Anatomie und Histologie: Tegument und seine Organe; Nervensystem und Sinnesorgane; Myologie; Skelett (einschl. Osteologie und Zahnbildung); Inneres Skelett bei Wirbellosen; Ernährungssystem; Circulations- und Respirationsorgane; Wassergefäßsystem, Blut, Lymphe, Cœlomflüssigkeit, Chylus. Spezielle Drüsen; Excretions-Organe; Reproduktive Organe; Spezielle äussere Charaktere; Farbe. Rudimentäre oder unentwickelte Organe und Organe ungewisser Natur.

0000-0231. Zoologie générale.

N.B.—Les sujets énumérés sous les indices 0000 à 0231 peuvent être représentés dans chacune des “branches” suivantes; mais c'est seulement les ouvrages ayant trait à plusieurs “branches” qui doivent être catalogués sous les numéros 0000 à 0231; de là le terme de “Zoologie générale.”

HYPERZOOLOGIE.

- 0000 Philosophie.
 0010 Histoire. Biographie.
 0020 Périodiques. Rapports d'Institutions, de Sociétés, de Congrès, d'Explorations, etc.
 0030 Traités généraux, Manuels, Dictionnaires, Recueils, Tables.
 0032 Bibliographies.
 0040 Discours, Cours, etc., d'un caractère général.
 0050 Enseignement.
 0060 Institutions, Musées, Collections, Aquaria, Jardins, Utilité et Nocuité. Zoologie en rapport avec la Médecine, etc. (*Voy aussi* les sections générales de la Zoologie spéciale.)
 0070 Nomenclature (principes de).
 0090 Technique. Méthodes de recherche, instruments et appareils.
 0207 STRUCTURE (OU MORPHOLOGIE). [En général ou dans plusieurs classes d'animaux.] (*Voy. aussi* (L) Biologie Générale, (O) Anatomie et (Q) Physiologie.)

Généralités; Anatomie comparée; Anatomie spéciale et Histologie (*ex.* organes tégumentaires); Système nerveux et organes des sens; Myologie; Squelette (y compris Ostéologie et Dentition); Structure des Invertébrés; Système digestif; Appareils de la circulation et de la respiration; Système aquifère vasculaire, sang, lymph, liquide de la cavité générale, chyle. Glandes spéciales; Organes d'excrétion; Organes de reproduction; Organes externes spéciaux; Couleur. Organes rudimentaires ou vestiges d'organes anciens; Organes de nature incertaine.

0000-0231. Zoologia comprensiva.

I soggetti designati coi numeri 0000 a 0231 possono ricorrere in ognuno dei seguenti rami. Nel catalogo, tuttavia, soltanto i lavori che trattano di diversi rami saranno registrati sotto i numeri 0000 a 0231; di qui il termine “Zoologia comprensiva.”

IPERZOOLOGIA.

- Filosofia.
 Storia. Biografia.
 Periodici. Resoconti di Istituti Società, Congressi, Esplorazioni.
 Trattati generali, Libri di testo, Dizionari, Raccolte, Tavole.
 Bibliografie.
 Discorsi, Letture, etc., aventi un carattere generale.
 Pedagogia.
 Istituti, Musei, Collezioni, Aquaria, Giardini, Utilità e Nocività. Zoologia in rapporto alla medicina. (*Vedi anche* le sezioni generali della Zoologia speciale.)
 Principi di Nomenclatura.
 Tecnica. Metodi di ricerca, istrumenti ed apparati.
 STRUTTURA (O MORFOLOGIA). [In generale oppure di più di una classe di animali.] (*Vedi anche* (L) Biologia Generale, (O) Anatomia e (Q) Fisiologia).

Generalità; Anatomia comparata; Anatomia speciale e Istologia; Tegumento e suoi organi; Sistema nervoso e organi di senso; Miologia; Scheletro (incl. Osteologia e Dentizione); Strutture interne scheletriche degli invertebrati; Apparecchio alimentare; Organi della circolazione e della respirazione; Sistema acquifero vascolare, Sangue, Linfa, Liquido celomatico, Chilo; Glandule speciali; Organi escretori; Organi riproduttivi. Caratteri speciali esterni; Colore. Organi rudimentali e in vestigio e organi di natura incerta.

0211 **PHYSIOLOGY** [of the Animal Kingdom, or of more than one of its Branches]. (*See also* (Q) *Physiology.*)

[Physiology will be treated as a separate science. In zoology it is therefore only necessary to collect those physiological memoirs that specially interest zoologists; hence a detailed division is superfluous, but the following may be cited as examples to come under this heading.]

General; Production of Sex; Production of Caste; Function of Sense Organs; Function of Special Organs and Structures, *e.g.*, of Glands; Assimilation; Respiration; Environmental Effects; Change of Function; Adaptation. Duration of Life; Senescence; Death.

0215 **DEVELOPMENT.** [General works on more than one of the Branches.] (*See also* L 2000-5900; O 1500-1940.)

General; Budding and Asexual Reproduction; Oogenesis and Ovum; Spermatogenesis and Spermatozoon; Phenomena of Fertilization; Parthenogenesis; Embryology, Organogeny and Histogeny; Metamorphosis and Larval Forms; Post-embryonic Ontogeny; Alternation of Generations; Pædogenesis; Dissogony; Cycles of Generations; Changes during Life; Regeneration; Hermaphroditism.

For cell-structure and processes *see* (L) *General Biology—Cytology.*

0219 **ETHOLOGY.** [Works dealing with one or more of the following subjects, and relating to more than one Branch of the Animal Kingdom.]

General; Habits; Phenology; Migration and Nonmigration; Hibernation; Parental Relations; Sexual Relations; Sexual Dimorphism; Ovipos-

PHYSIOLOGIE [des Tierreichs oder mehrerer seiner Zweige]. (*Siehe auch* (Q) *Physiologie.*)

[Physiologie wird als besondere Wissenschaft behandelt werden. In „Zoologie“ brauchen daher nur solche physiologische Abhandlungen aufgeführt zu werden, die speziell den Zoologen interessieren. Darum ist eine detaillierte Einteilung hier überflüssig, doch mag das Folgende als Beispiel dienen.]

Allgemeines; Hervorbringung des Geschlechtes, der Rasse; Funktion der Sinnesorgane; Funktion besonderer Bildungen, *z. B.* Drüsen; Assimilation; Atmung; Wirkung der Umgebung; Funktionswechsel; Anpassung. Lebensdauer; Altern; Tod.

ENTWICKELUNG. [Allgemeine Werke über mehr als einen der Zweige.] (*Siehe auch* L 2000-5900; O 1500-1940.)

Allgemeines; Knospenbildung und ungeschlechtliche Fortpflanzung; Oogenesis und Ovum; Spermatogenesis und Spermatozoon; Befruchtungs-Phänomene; Parthenogenesis; Embryologie, Organogenie und Histogenie; Metamorphose und Larvenformen; postembryonale Ontogenie; Generationswechsel; Pædogenesis; Dissogonie; Generations-Cyklen; Veränderungen während des Lebens; Regeneration; Hermaphroditismus.

Zell-Struktur und -Prozesse *siehe* (L) *Allgemeine Biologie—Cytologie.*

ETHOLOGIE. [Arbeiten, die einen oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.]

Allgemeines; Lebensgewohnheiten; Phänologie; Wanderung und Nichtwanderung; Winterschlaf; Beziehungen zwischen Eltern und Nachkommenschaft;

0211 **PHYSIOLOGIE** [du règne animal ou de plusieurs branches du règne animal]. (*Voy. aussi* (Q) Physiologie.)

[La Physiologie doit être traitée comme une science distincte; en conséquence, en Zoologie il ne sera nécessaire de relever que les mémoires de physiologie qui intéressent spécialement les zoologistes; une division détaillée est donc superflue, néanmoins on peut citer la suivante comme exemple.]

Généralités; Production des sexes; Formation des genres; Fonctions des organes des sens; Fonctions des organes de structure spéciale (*ex.* des glandes); Assimilation; Respiration; Influence du milieu; Changement de fonction; Adaptation; Durée de la vie; Sénescence; Mort.

0215 **DÉVELOPPEMENT**. [Ouvrages généraux ayant trait à plusieurs "branches."] (*Voy. aussi* L 2000-5900; O 1500-1940.)

Généralités; Bourgeonnement et reproduction asexuée; Oogenèse et œuf; Spermatogenèse et Spermatozoides; Phénomènes de fécondation; Parthénogenèse; Embryologie, organogénie et histogénie; Métamorphose et formes larvaires; Ontogénie postembryonnaire; Générations alternantes; Pædogénèse; Dissogonie; Cycles de générations; Changements pendant la vie; Régénération; Hermaphrodisme.

Pour la structure et les processus cellulaires *voir* (L) Biologie générale—Cytologie.

0219 **ETHOLOGIE**. [Ouvrages traitant d'un ou de plusieurs des sujets suivants et se rapportant à un ou à plusieurs embranchements du règne animal].

Généralités; Habitudes; Phénologie; Migration et non-migration; Hibernation; Relations de parenté; Relations sexuelles; Dimorphisme [sexuel; Ponte;

FISIOLOGIA [del Regno animale o di più di uno dei suoi rami]. (*Vedi anche* (Q) Fisiologia.)

[La fisiologia sarà trattata come una scienza separata. Nella zoologia è perciò soltanto necessario raccogliere quelle memorie di fisiologia che più specialmente possono interessare lo zoologo; quindi una divisione particolareggiata è superflua, ma ciò che segue può rappresentare la divisione di questo capitolo.]

Generalità; Produzione dei sessi; Produzione di caste; Funzione degli organi di senso; Funzione di speciali organi, *p. es.* le glandule; Assimilazione; Respirazione; Effetti dell' ambiente; Cambiamento di funzione; Adattamento. Durata della vita; Seenscenza; Morte.

SVILUPPO. [Lavori generali su più di uno dei rami.] (*Vedi anche* L 2000-5900; O 1500-1940.)

Generalità; Gemmazione e riproduzione asessuale; Oogenesi e Uovo; Spermatogenesi e Spermatozoide; Fenomeni di Fecondazione; Partenogenesi; Embriologia, organogénia ed istogenia; Metamorfosi e forme larvali; Ontogenia postembrionale; Alternanza delle generazioni; Pedogenesi; Dissogonia; Cicli delle generazioni; Cambiamenti durante la vita; Rigenerazione; Ermafroditismo.

Per la struttura cellulare e i processi di sviluppo *vedi* (L) Biologia generale—Citologia.

ETOLOGIA. [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.]

Generalità; Abitudini; Fenologia; migrazione e non migrazione; ibernazione; rapporti parentali; rapporti sessuali; dimorfismo sessuale;

tion; Voice; Sound Production; (*see also* Q 4145). Luminescence; (*see also* Q 0260). Habitat with sub-divisions, *e.g.*, Cavernicolous Animals, Pelagic and Deep-sea Animals (plankton), etc.; Instinct and Psychology; Social Relations; Gregariousness; Symbiosis; (*see also* L 5550; Q 0285; R 1640); Parasitism; Defensive Processes (including Protective Coloration, Mimicry and Protective Resemblance); Ornament and Colour; Breeding and Acclimatisation.

- 0223 VARIATION AND ÆTIOLOGY. [Works dealing with one or more of the following subjects and relating to more than one Branch of the Animal Kingdom.] (*See also* (L) General Biology, and (Q) Physiology.)

General; Substantive variation; size, proportions, form, colour, etc. Meristic variations; numerical [meristic proper]; homoeotic; teratological. Bionomic variation; of fertility; of time of appearance; of maturity; of development; of habits. Phylogeny.

Or indexed alternatively or supplementally, with reference to treatment—descriptive, statistical, mathematical; geographical or stational.

Heredity. Grafts. Crosses and Hybrids. In-breeding. Telegonny. Evolution. (*See also* K 0200; L 4300.)

- 0227 GEOGRAPHICAL ZOOLOGY.

Geographical Distribution. [Works relating to the principles and modes of distribution.]

Topographical Zoology. [Works relating to the Fauna of one or more of the sub-divisions used in (J) Geography, and dealing

Sexuelle Beziehungen; Sexueller Dimorphismus; Eiablage; Stimme; Hervorbringung von Lauten (*siehe auch* Q 4145); Leuchtvermögen (*siehe auch* Q 0260); Habitat mit Unterabteilungen, z. B. Höhlentiere, pelagische und Tiefsee-Tiere (Plankton) u. s. w.; Instinkt und Psychologie; Soziale Beziehungen; Heerdenleben; Symbiose (*siehe auch* L 5550; Q 0285; R 1640); Parasitismus; Verteidigungs-Processe (einschl. Schutzfärbung, Mimicry und schützende Ähnlichkeiten); Schmuck und Farbe; Züchtung und Akklimatisation.

- VARIATION UND ÆTIOLOGIE. [Arbeiten, die einen oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.] (*Siehe auch* (L) Allgemeine Biologie und (Q) Physiologie.)

Allgemeines; Substantielle Variation; Grösse, Proportionen, Form, Farbe etc. Meristische Variationen; numerische (meristische im eigentlichen Sinne); homoeotische; teratologische. Bionomische Variation; in Hinsicht auf Fruchtbarkeit, auf Erscheinungszeit; auf Zeit der Reife; auf Entwicklung; auf Lebensgewohnheiten. Phylogenie.

Hierneben oder als Ergänzung eine Einteilung mit Rücksicht auf die Art der Behandlung—ob descriptiv, statistisch, mathematisch; geographisch oder nach Standort.

Vererbung. Pfropfen. Kreuzungen und Bastardbildungen. Inzucht. Telegonie. Evolution. (*Siehe auch* K 0200; L 4300.)

- GEOGRAPHISCHE ZOOLOGIE.

Geographische Verbreitung. [Arbeiten, die sich auf die Prinzipien und die Arten der Verbreitung beziehen.]

Topographische Zoologie. [Arbeiten, die sich auf die Fauna einer oder mehrerer der Unterabteilungen in (J) Geographie,

Voix; Productions des sons; (*Voy aussi* Q 4145.) Production de la lumière; (*Voy. aussi* Q 0260.) Habitat avec subdivisions, ex. Animaux cavernicoles; Animaux pélagiques et des zones abyssales (plankton), etc.; Instinct et Psychologie; Relations sociales; Instincts sociaux; Symbiose; (*Voy. aussi* L 5550; Q 0285; R 1640); Parasitisme; Procédés de défense; Ressemblance (y compris la coloration protectrice, le mimétisme et la ressemblance protectrice); Ornaments et couleur; Elevage et acclimatation.

oviposizione; voce; produzione di suoni (*v. anche* Q 4145); luminosità (*v. anche* Q 0260); Habitat con suddivisioni, p. es. animali cavernicoli, animali pelagici e delle zone abissali (plankton), etc.; istinto e psicologia; rapporti sociali; istinti gregarii; simbiosi (*v. anche* L 5550; Q 0285; R 1640); parasitismo; processi difensivi (compresi la colorazione protettiva, il mimetismo e la rassomiglianza protettiva); ornamenti e colore; Allevamento ed acclimatazione.

0223 VARIATION ET ETIOLOGIE. [Ouvrages traitant d'un ou de plusieurs des sujets suivants, et ayant trait à plus d'une branche du règne animal.] (*Voy. aussi* (L) Biologie Générale et (Q) Physiologie.)

VARIAZIONE ED ETIOLOGIA. [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.] (*Vedi anche* (L) Biologia Generale e (Q) Fisiologia).

Généralités; Variations traitées en elles-mêmes; Taille, proportions, forme, couleur, etc. Variations méristiques; variations numériques (méristiques proprement dites); homéotiques; tératologiques. Variations bionomiques, variations de fécondité; variations dans l'époque d'apparition, la maturité, le développement, les habitudes. Phylogénie.

Generalità; Variazione sostanzialmente considerata; dimensioni, proporzioni, forma, colore, etc. Variazioni meristiche; numeriche (meristiche vere e proprie); omeotiche; per teratologia. Variazioni bionomiche; di fecondità; di epoca di apparizione; di maturità; di sviluppo; di abitudini. Filogenia.

Variations traitées d'une façon supplémentaire dans les ouvrages descriptifs, statistiques, mathématiques, géographiques.

Oppure considerata alternativamente e supplementariamente sotto il punto di vista descrittivo, statistico, matematico, geografico o stazionario.

Herédité. Greffes. Croisements et Hybrides. Unions consanguines. Télégonie. Évolution. (*Voy. aussi* K 0200; L 4300.)

Eredità. Innesti. Incrociamenti e ibridismi. Consanguineità. Telegonia. Evoluzione. (*Vedi anche* K 0200; L 4300).

0227 ZOOLOGIE GÉOGRAPHIQUE.

Distribution géographique des animaux. [Ouvrages ayant trait aux principes et aux modes de distribution géographique.]

Zoologie topographique. [Ouvrages ayant trait à la faune d'une ou de plusieurs des subdivisions employées en (J)]

ZOOLOGIA GEOGRAFICA.

Distribuzione geografica. [Lavori relativi ai principi e ai modi di distribuzione.]

Zoologia topografica. [Lavori relativi alla Fauna di una o più delle suddivisioni adottate in (J) Geografia, e riferentisi a

with more than one of the Branches of Zoology.]

beziehen und mehr als einen Zweig der Zoologie umfassen.]

0231 TAXONOMY or CLASSIFICATION in general.

[In this are to be placed works dealing with the principles of zoological classification; works discussing the classification of more than one of the Branches; works dealing with the relations of the great groups of existing animals; phylogenetic classification, *i.e.*, the relations in time of the great groups of animals. Works relating to the classification of only one of the Branches are to be dealt with in that Branch.]

TAXONOMIE ODER KLASSIFIKATION IM ALLGEMEINEN.

[Hierher sind Arbeiten zu stellen, welche die Prinzipien der zoologischen Klassifikation behandeln; ferner Arbeiten, welche die Klassifikation von mehr als einem der Zweige discutieren; Arbeiten, welche die Beziehungen der grossen Gruppen der lebenden Tierwelt behandeln; phylogenetische Klassifikation, d. h. die zeitlichen Beziehungen der grossen Tiergruppen. Dagegen sind Arbeiten, die sich auf die Klassifikation eines einzelnen Zweiges beziehen, bei diesem zu erledigen.]

0400-6031 Special Zoology.

0400-6031 Spezielle Zoologie.

0400-0431 Protozoa. (See also R 1200.)

Protozoa. (Siehe auch R 1200.)

The principal divisions are:—

Mycetozoa; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa); Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia); Mastigophora (Flagellata, Dinoflagellata); Infusoria (Acinetaria, Ciliata).

Hauptabteilungen sind:—

Mycetozoa; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa); Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia); Mastigophora (Flagellata, Dinoflagellata); Infusoria (Acinetaria, Ciliata).

0600-0631 Porifera (or Spongida).

The principal divisions are:—

Calcarea; Hexactinellida; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongia).

Porifera (oder Spongida).

Hauptabteilungen sind:—

Calcarea; Hexactinellida; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongia).

0800-0831 Coelenterata (or Cnidaria).

The principal divisions are:—

Graptolites; Hydromedusae; Scyphomedusae; Monticuliporidae; Stromatoporidae; Alecyonaria; Zoantharia; Ctenophora.

Coelenterata (oder Cnidaria).

Hauptabteilungen sind:—

Graptolites; Hydromedusae; Scyphomedusae; Monticuliporidae; Stromatoporidae; Alecyonaria; Zoantharia; Ctenophora.

1000-1031 Echinodermata.

The principal divisions are:—

Cystoidea; Crinoidea; Blastoidea; Asteroidea; Ophiuroidea; Echinoidea; Holothurioidea.

Echinodermata.

Hauptabteilungen sind:—

Cystoidea; Crinoidea; Blastoidea; Asteroidea; Ophiuroidea; Echinoidea; Holothurioidea.

Géographie et ayant trait à plus d'une branche de la Zoologie.]

più di uno dei rami della zoologia.]

0231 **TAXONOMIE** ou **CLASSIFICATION** en général.

[Dans cette division doivent être placés les ouvrages traitant des principes de la classification zoologique; les ouvrages discutant la classification de plus d'une "branche"; les ouvrages traitant des relations des grands groupes d'animaux de la faune actuelle; la classification phylogénétique, c'est à dire les relations anciennes entre les grands groupes d'animaux. Les ouvrages ayant trait à la classification d'une branche isolée seront traités à propos de cette branche.]

TASSONOMIA E **CLASSIFICAZIONE** IN GENERALE.

[Qui saranno posti i lavori che trattano dei principi della classificazione zoologica; i lavori discutenti la classificazione di più di un ramo; i lavori riguardanti le relazioni tassonomiche dei grandi gruppi degli animali esistenti; la classificazione filogenetica, ossia le relazioni nel tempo dei grandi gruppi di animali. I lavori relativi alla classificazione di uno solo dei rami sono trattati in quel ramo.]

0400-6031. Zoologie spéciale.

0400-6031. Zoologia Speciale.

0400-0431 Protozoaires. (*Voy. aussi R 1200.*)

Voici les divisions principales :—

Mycétozoaires; Rhizopodes (Radiolaires, Héliozaïres, Foraminifères, Amœbiens, Protéomyxes); Sporozoaires (Grégarinides, Coccidiides, Haemosporidies, Myxosporidies, Sarcosporidies); Mastigophores (Flagellés, Dinoflagellés); Infusoires (Acinétiens, Ciliés.)

Protozoa. (*Vedi anche R 1200.*)

Le divisioni principali sono :—

Mycetozoa; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa); Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia); Mastigophora (Flagellata, Dinoflagellata); Infusoria (Acinetaria, Ciliata).

0600-0631 Porifères (ou Spongiaires).

Voici les divisions principales :—

Calcaires; Hexactinellides; Démospongiaires (Carnosa, Tetractinellides, Monaxonides, Kératosa, Myxospongiaires).

Porifera (vel Spongida).

Le divisioni principali sono :—

Calcarea; Hexactinellida; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

0800-0831 Cœlentérés (ou Cnidaria).

Voici les divisions principales :—

Graptolites; Hydroméduses; Scyphoméduses; Monticuliporides; Stromatoporides; Alcyonaires; Zoanthaires; Ctenophores.

Cœlenterata (vel Cnidaria).

Le divisioni principali sono :—

Graptolites; Hydromedusae; Scyphomedusae; Monticuliporidae; Stromatoporidae; Alcyonaria; Zoantharia; Ctenophora.

1000-1031 Échinodermes.

Voici les divisions principales :—

Cystoides; Crinoïdes; Blastoides; Asteroïdes; Ophiuroïdes; Echinoïdes; Holothurioïdes.

Echinodermata.

Le divisioni principali sono :—

Cystoidea; Crinoidea; Blastoidea; Asteroidea; Ophiuroidea; Echinoidea; Holothurioidea.

1200-1231 **Platyhelminthes. Mesozoa and Trichoplax.**

The principal divisions are :—
Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidae, Orthonectidae); *Trichoplax*.

1400-1431 **Nemathelminthes.**

The principal divisions are :—
Nematoda; Nematomorpha (or Gordiidae); Acanthocephala.

1600-1631 **Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera.)**

1800-1831 **Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.**

2000-2031 **Brachiopoda. Bryozoa (or Polyzoa).**

The principal divisions are :—
Brachiopoda.
Bryozoa : Entoprocta; Ectoprocta (Gymnolaema: Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

2200-2231 **Mollusca.**

The principal divisions are :—
Lamellibranchiata (or Pelecypoda) (Order should be given); Scaphopoda; Amphineura.

Gastropoda includes Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa); Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylomatophora). Families of Prosobranchiata and Pulmonata should be mentioned. See Cambridge Natural History.

Cephalopoda includes Nautiloidea, Ammonoidea, Dibranchiata.

2400-2431 **Arthropoda.**

2431 will not include a systematic arrangement of genera and species.

Platyhelminthes. Mesozoa und Trichoplax.

Hauptabteilungen sind :—
Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidae, Orthonectidae); *Trichoplax*.

Nemathelminthes.

Hauptabteilungen sind :—
Nematoda; Nematomorpha (oder Gordiidae); Acanthocephala.

Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).

Archiannelida. Polychæta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

Brachiopoda. Bryozoa (oder Polyzoa).

Hauptabteilungen sind :—
Brachiopoda.
Bryozoa : Endoprocta; Ectoprocta (Gymnolaema: Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

Mollusca.

Hauptabteilungen sind :—
Lamellibranchiata (oder Pelecypoda) (Ordnung angeben); Scaphopoda; Amphineura.

Gastropoda umfasst Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa; Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylomatophora). Familien der Prosobranchiata und Pulmonata angeben. Siehe Cambridge Natural History.

Cephalopoda umfasst Nautiloidea, Ammonoidea, Dibranchiata.

Arthropoda.

2431 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

1200-1231 **Platyhelminthes. Mésozoaires**
et le **Trichoplax**.

Voici les divisions principales :—
Platyhelminthes (Turbellariés,
Trématodes, Cestodes, Némertiens);
Mésozoaires (Dicyemidæ, Ortho-
nectidæ); *Trichoplax*.

1400-1431 **Némathelminthes.**

Voici les divisions principales :—
Nématodes; Nématomorphes (ou
Gordiens); Acanthocéphales.

1600-1631 **Chætognathes. Rotifères.**
Gastrotriches. Kinorhynques (ou
Echinodères).

1800-1831 **Archiannélides. Polychètes.**
Myzostomes. Oligochètes.
Géphyriens. Phoronis. Hirudinées.

2000-2031 **Brachiopodes. Bryozoaires (ou**
Polyzoaires).

Voici les divisions principales :—
Brachiopodes.
Bryozoaires : Entoproctes; Ec-
toproctes (Gymnolèmes : Cyclo-
stomes, Trepostomes, Cryptostomes,
Cheilostomes, Cténostomes; Phylac-
tolèmes).

2200-2231 **Mollusques.**

Voici les divisions principales :—
Lamellibranches (ou Pélécy-podes)
(indiquer l'ordre); Scaphopodes;
Amphineures.

Les Gastropodes comprennent les
Prosobranches (Rhipidoglosses,
Pténoglosses, Taenioglosses, Rachi-
glosses, Toxoglosses); Hétéropodes;
Opisthobranches (Tectibranches,
Nudibranches); Ptéropodes; Pul-
monés (Basomatophores, Stylom-
matophores). Indiquer les familles
des Prosobranches et des Pul-
monés. *Voy. la Cambridge Natural*
History.

Les Céphalopodes comprennent
les Nautilés, Ammonites, Di-
branches.

2400-2431 **Arthropodes.**

2431 ne comprendra pas un
arrangement systématique des genres
et des espèces.

Platyhelminthes. Mesozoa et Tri-
choplax.

Le divisioni principali sono :—
Platyhelminthes (Turbellaria,
Trematoda, Cestoda, Nemertinea);
Mesozoa (Dicyemidæ, Orthonec-
tidæ); *Trichoplax*.

Nemathelminthes.

Le divisioni principali sono :—
Nematoda; Nematomorpha (vel
Gordiidae); Acanthocephala.

Chætognatha. Rotifera. Gastro-
tricha. Kinorhyncha (vel Echi-
nodera).

Archiannelida. Polychæta. Myzo-
stomaria. Oligochæta. Gephyrea.
Phoronis. Hirudinea.

Brachiopoda. Bryozoa (vel Polyzoa).

Le divisioni principali sono :—
Brachiopoda.
Bryozoa : Entoprocta; Ecto-
procta (Gymnolaema : Cyclosto-
mata, Trepostomata, Cryptosto-
mata, Cheilostomata, Ctenosto-
mata; Phylactolaema).

Mollusca.

Le divisioni principali sono :—
Lamellibranchiata (vel Pelecyp-
poda) (indicare l'ordine); Scapho-
poda; Amphineura.

Gastropoda includono Prosobran-
chiata (Rhipidoglossa, Ptenoglossa,
Taenioglossa, Rachiglossa, Toxo-
glossa); Heteropoda; Opisthobran-
chiata (Tectibranchiata, Nudi-
branchiata); Pteropoda; Pulmo-
nata (Bassomatophora, Stylom-
matophora). Indicare le famiglie
dei Prosobranchiata e Pulmonata.
Vedi Cambridge Natural History.

Cephalopoda includono Nauti-
loidea, Ammonoidea, Dibranchiata.

Arthropoda.

2431 non deve includere la dis-
posizione sistematica dei generi e
delle specie.

2600-2631 Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).

Leptostraca.

Arthrostraca (or Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (or Podophthalma) includes Decapoda, Schizopoda, Stomatopoda, Cumacea.

Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).

Leptostraca.

Arthrostraca (oder Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (oder Podophthalma) umfasst Decapoda, Schizopoda, Stomatopoda, Cumacea.

2800-2831 Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.

Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.

3000-3031 Arachnida.

Arachnida consists of Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (or Pseudoscorpiones), Phalangida (or Opiliones), Acarida (or Acari).

Arachnida.

Arachnida umfasst Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (oder Pseudoscorpiones), Phalangida (oder Opiliones), Acarida (oder Acari).

3200-3231 Prototracheata (or Onychophora).

Prototracheata (oder Onychophora).

Prototracheata includes only *Peripatus* and its divisions.

Prototracheata umfasst nur *Peripatus* und dessen Abteilungen.

3400-3431 Myriopoda.

Myriopoda consists of Chilopoda, Diplopoda (= Pselaphognatha and Chilognatha), Symphyla (or Scolopendrella), Pauropoda.

Myriopoda.

Myriopoda umfasst Chilopoda, Diplopoda (= Pselaphognatha und Chilognatha), Symphyla (oder Scolopendrella), Pauropoda.

3500-3531 Insecta.

3531 will not include a systematic arrangement of genera and species.

Insecta.

3531 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

3600-3631 Aptera (or Apterygogenea). Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).

Aptera (oder Apterygogenea). Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).

Aptera, proper, consists of Thysanura and Collembola.

Aptera, im eigentlichen Sinne, umfasst Thysanura und Collembola.

3800-3831 Orthoptera. Neuroptera. Trichoptera.

Orthoptera. Neuroptera. Trichoptera.

The principal divisions are :—

Orthoptera (Forficulidae or Dermaptera, Hemimeridae, Blattidae, Mantidae, Phasmodae, Gryllidae, Locustidae, Acridiidae).

Hauptabteilungen sind :—

Orthoptera (Forficulidae oder Dermaptera, Hemimeridae, Blattidae, Mantidae, Phasmodae, Gryllidae, Locustidae, Acridiidae).

2600-2631 Crustacés.

Entomostracés (= Cirripèdes, Ostracodes, Copépodes, Phyllopoies).

Leptostracés.

Arthrostracés (ou Edriophthalmes) (= Amphipodes, Isopodes, Anisopodes).

[Malacostracés (= Thoracostracés + Arthrostracés).]

Les Thoracostracés (ou Podophthalmes), comprennent les Décapodes, Schizopodes, Stomatopodes, Cumacés.

Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).

Leptostraca.

Arthrostraca (vel Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (vel Podophthalma) includono Decapoda, Schizopoda, Stomatopoda, Cumacea.

2800-2831 Trilobites. Xiphosures. Euryptérides. Pantopodes. Tardigrades. Linguatulides.

Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.

3000-3031 Arachnides.

Les Arachnides comprennent les Scorpionides, Pédipalpes, Palpi-grades, Aranéides, Solifuges, Chernetes (ou Pseudoscorpions), Phalangides (ou Opilions), Acariens.

Arachnida.

Arachnida includono Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifuge, Chernetida (vel Pseudoscorpiones), Phalangida (vel Opiliones), Acarida (vel Acari).

3200-3231 Prototrachéates (ou Onychophores).

Les Prototrachéates comprennent seulement le genre *Peripatus* et ses divisions.

Prototracheata (vel Onychophora).

Nei Prototracheata è incluso il solo *Peripatus* e le sue divisioni.

3400-3431 Myriapodes.

Les Myriapodes comprennent les Chilopodes, Diplopoies (Psélaphognathes et Chilognathes), Symphylens (ou Scolopendrelles), Paupodes.

Myriopoda.

Chilopoda, Diplopoda (= Pselaphognatha e Chilognatha), Symphyla (vel Scolopendrella), Paupoda.

3500-3531 Insectes.

3531 ne comprendra pas un arrangement systématique des genres et des espèces.

Insecta.

3531 non deve includere la disposizione sistematica dei generi e delle specie.

3600-3631 Aptères (ou Aptérygogéniens). Anoploures. Mallophages. Thysanoptères (ou Physopodes). Siphonaptères (ou Aphaniptères).

Les Aptères proprement dits comprennent les Thysanoures et les Collembolles.

Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphaniptera).

Gli Aptera propriamente detti consistono nei Thysanura e Collembola.

3800-3831 Orthoptères. Névroptères. Trichoptères.

Voici les divisions principales :— Orthoptères (Forficulides ou Dermaptères, Hémiérides, Blattides, Mantides, Phasmides, Gryllides, Locustides, Acridides).

Orthoptera. Neuroptera. Trichoptera.

Le divisioni principali sono :— Orthoptera (Forficulidæ vel Dermaptera, Hemimeridæ, Blattidæ, Mantidæ, Phasmidæ, Gryllidæ, Locustidæ, Acrididæ).

Neuroptera (Planipennia, Embiidae, Termitidae, Psocidae, Perlidae, Ephemeridae, Odonata).

Each slip relating to Neuroptera should also state to which of these divisions it refers.

Most of the Palaeozoic Insects are to be dealt with in this branch.

4000-4031 **Hemiptera** (or **Rhynchota**) excl. Anoplura, which are placed in 3600.

The principal divisions are :—

Hemiptera Heteroptera and Hemiptera Homoptera. [Phytophthires (Aphidae, Psyllidae, Aleurodidae, Coccidae) are included in Hemiptera Homoptera.]

Families to be mentioned in all cases.

See Cambridge Natural History.

4200-4231 **Diptera** (excl. Siphonaptera, which are placed in 3600-3631).

The slips should be marked with the name of the family of Diptera. See Cambridge Natural History.

4400-4431 **Lepidoptera**.

The principal divisions are :—

Rhopalocera ; Heterocera.

The family to be mentioned in all cases. See Cambridge Natural History.

4600-4631 **Hymenoptera**.

The principal divisions are :—

Aculeata = Anthophila (Apidae Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna). Tubulifera = Chrysididae. Parasitica = Trigonidae, Proctotrupidae, Pelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evaniidae, Stephanidae, Cynipidae. Sessiliventre (or Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae

Neuroptera (Planipennia, Embiidae, Termitidae, Psocidae, Perlidae, Ephemeridae, Odonata).

Jeder Zettel für Neuroptera soll auch angeben, auf welche dieser Abteilungen er sich bezieht.

Die meisten der paläozoischen Insekten werden bei diesem Zweige zu behandeln sein.

Hemiptera (oder **Rhynchota**), excl. Anoplura, welche unter 3600 eingeordnet sind.

Hauptabteilungen sind :—

Hemiptera Heteroptera und Hemiptera Homoptera. [Phytophthires (Aphidae, Psyllidae, Aleurodidae, Coccidae) sind in Hemiptera Homoptera enthalten.]

Familien immer angeben. Siehe Cambridge Natural History.

Diptera (excl. Siphonaptera, welche unter 3600-3631 eingeordnet sind).

Bei den Diptera sind auf den Zetteln die Namen der Familien zu vermerken. Siehe Cambridge Natural History.

Lepidoptera.

Hauptabteilungen sind :—

Rhopalocera ; Heterocera.

Familien immer angeben. Siehe Cambridge Natural History.

Hymenoptera.

Hauptabteilungen sind :—

Aculeata = Anthophila (Apidae Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna). Tubulifera = Chrysididae. Parasitica = Trigonidae, Proctotrupidae, Pelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evaniidae, Stephanidae, Cynipidae. Sessiliventre (oder Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae.

Névroptères (Planipennes, Embiides, Termitides, Psocides, Perlides, Ephémérides, Odonates).

Chaque fiche relative aux Névroptères doit aussi indiquer à laquelle de ces divisions elle se rapporte.

La plupart des Insectes paléozoïques devront être traités dans cette branche.

Neuroptera (Planipennia, Embiidae, Termitidae, Psocidae, Perlidae, Ephemeridae, Odonata.)

Ciascuna scheda relativa ai Neuroptera deve stabilire a quale di queste divisioni del gruppo si riferisce.

La maggior parte degli insetti paleozoici riferisconsi a questo ramo.

4000-4031 Hémiptères (ou Rhynchotes) à l'exclusion des Anoploures, qui sont placés sous le numéro 3600.

Voici les divisions principales :—

Hémiptères Hétero-ptères et Hémiptères Homoptères. [Les Phytophthires (Aphides, Psyllides, Aleurodides, Coccides) sont compris dans les Hémiptères Homoptères.]

Indiquer les familles en tout cas.

Voy. Cambridge Natural History.

Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 3600.

Le divisioni principali sono :—

Hemiptera Heteroptera e Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidæ, Coccidæ) sono inclusi in Hemiptera Homoptera.]

Indicare le famiglie in ogni caso.

Vedi Cambridge Natural History.

4200-4231 Diptères (sauf les Siphonaptères, qui sont placés sous les numéros 3600-3631).

Les fiches doivent porter le nom de la famille des Diptères. Voy. Cambridge Natural History.

Diptera (esclusi Siphonaptera, che sono indicati dai numeri 3600-3631).

Le schede dovranno portare il nome della famiglia dei Diptera cui si riferiscono. Vedi Cambridge Natural History.

4400-4431 Lépidoptères.

Voici les divisions principales :—
Rhopalocères; Hétérocères.

Indiquer la famille en tout cas.

Voy. Cambridge Natural History.

Lepidoptera.

Le divisioni principali sono :—
Rhopalocera; Heterocera.

Indicare la famiglia in ogni caso.

Vedi Cambridge Natural History.

4600-4631 Hyménoptères.

Voici les divisions principales :—

Aculeata (ou Porte-aiguillons)= Antophiles (Apides, Andrénides), Vespides (Diploptères) Sphégides s.l. (Fouisseurs) Formicides (Hétérogynes). Tubulifères = Chrysidés. Parasites = Trigonaliides, Proctotrupides, Péléciniides, Chalcidiides, Ichneumonides, Braconides, Mégalyrides, Evaniides, Stéphanides, Cynipides. Sessiliventes (ou Chalastogastres) = Céphides, Siricides, Oryssides, Tenthredinides.

Hymenoptera.

Le divisioni principali sono :—

Aculeata = Anthophila (Apidae, Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna. Tubulifera = Chrysididae. Parasitica = Trigonulidae, Proctotrupidae, Ptelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evaniidae, Stephanidae, Cynipidae. Sessiliventes (vel Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae.

4800-4831 **Coleoptera** (incl. **Strepsiptera**).

The name of the family referred to should be given on each slip.

The families are numerous. They are included in the Munich Catalogue of the Coleoptera (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) and (the subsequent additions) in "Cambridge Natural History," vol. vi.

Coleoptera (incl. **Strepsiptera**).

Auf jedem Zettel ist der Name der betr. Familie anzugeben.

Die Zahl der Familien ist gross. Sie sind aufgeführt in dem Münchener Coleopteren-Katalog (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) und (soweit es sich um spätere Zusätze handelt) in „Cambridge Natural History," vol. vi.

5000-5031 **Prochordata**, viz., **Leptocardii**, **Enteropneusta**, **Tunicata**.**Prochordata**, d.h., **Leptocardii**, **Enteropneusta**, **Tunicata**.5200-5231 **Vertebrata**.

No systematic enumeration is to be placed under 5231.

Vertebrata.

5231 wird keine systematische Aufzählung enthalten.

5400-5431 **Pisces** [excl. **Leptocardii** (or **Amphioxus**), for which see 5000-5031].**Pisces** [mit Ausschluss der **Leptocardii** (oder **Amphioxus**), siehe 5003-5031].

The principal divisions are :—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (or Teleostei and Ganoidei, with the exception of Arthrodira and Ostracodermi).

The family should be mentioned. See Cambridge Natural History.

Hauptabteilungen sind :—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (oder Teleostei und Ganoidei, mit Ausnahme von Arthrodira und Ostracodermi).

Familie angeben. Siehe Cambridge Natural History.

5600-5631 **Amphibia** and **Reptilia**.**Amphibia** and **Reptilia**.

The principal divisions are :—

Batrachia or Amphibia (Stegocephala or Labyrinthodontia, Apoda, Caudata or Urodela, Ecaudata or Anura).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Progansauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria or Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacertilia).

Hauptabteilungen sind :—

Batrachia oder Amphibia (Stegocephala oder Labyrinthodontia, Apoda, Caudata oder Urodela, Ecaudata oder Anura).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Progansauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria oder Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacterilia).

4800-4831 Coléoptères (y compris les Strepsiptères).

Le nom de la famille dont il est question doit être donné sur chaque fiche.

Les familles sont nombreuses. Elles sont indiquées dans le Catalogue des Coléoptères de Munich (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) et (pour les additions subséquentes) dans "Cambridge Natural History," vol. vi.

Coleoptera (incl. Strepsiptera).

Il nome della famiglia dev'essere indicato su ciascuna scheda.

Le famiglie sono numerose. Si trovano indicate nel Catalogo dei Coleoptera di Monaco (Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus) e (le susseguenti aggiunte) in "Cambridge Natural History," vol. vi.

5000-5031 Prochordés, c'est à dire, Leptocardiens, Entéropeustes, Tuniciers.

Prochordata, cioè Leptocardii, Enteropneusta, Tunicata.

5200-5231 Vertébrés.

Vertebrata.

Aucune énumération systématique n'est placée sous le numéro 5231.

Non deve porsi alcuna enumerazione sistematica sotto 5231.

5400-5431 Poissons [à l'exception des Leptocardiens (ou Amphioxus), qui se trouvent sous les numéros 5000-5031].

Pisces [escl. Leptocardii (vel Amphioxus), per i quali vedi 5000-5031].

Voici les divisions principales :—

Cyclostomes, Ostracodermes, Plagiostomes, Holocéphales, Arthrodires, Dipnoïques, Téléostomes (ou Téléostéens et Ganoïdes, à l'exception des Arthrodires et des Ostracodermes).

Le divisioni principali sono :—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (o Teleostei e Ganoidei, con esclusione di Arthrodira e Ostracodermi).

La famille doit être mentionnée. Voy. Cambridge Natural History.

Indicare la famiglia. Vedi Cambridge Natural History.

5600-5631 Batraciens et Reptiles.

Batrachia et Reptilia.

Voici les divisions principales :—

Batraciens ou Amphibies (Stégocéphales ou Labyrinthodontes, Apodes, Caudés ou Urodèles, Ecaudés ou Anoures).

Le divisioni principali sono :—

Batrachia vel Amphibia (Stegocephala vel Labyrinthodontia, Apoda, Caudata vel Urodela, Ecaudata vel Anura).

Reptiles (Anomodontes, Rhynchocephales, Plésiosauiens, Ichthyosauriens, Cotylosauriens, Pareiasauriens, Diaptosauriens, Protosauriens, Rhynchosauriens, Procolophoniens, Proganosauriens, Choristodères, Chéloniens, Crocodiliens, Dinosauriens, Ornithosauriens ou Ptérosauriens, Ophiidiens, Pythonomorphes, Rhiptoglosses, Lacertilien).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diaptosauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria vel Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacertilia).

5800-5831 Aves.

The principal divisions are :—

Acciptres, Aepyornithes, Alcae, Alectorides (including *Cariama*), Anisodactylæ (including Podargidae and *Steatornis*), Anseres (including Phœnicopteri and Palamediidae), Apteryges, Casuarii, Cocyges, Columbæ, Coraciæ, Crypturi, Cypseli, Dinornithes, Fulicariæ, Gallinæ, Gaviæ, Herodiones, Heterodactylæ, Impennes, Limicolæ, Odontolcæ, Odontormæ, Opisthocomi, Passeres (mention families), Pici, Psittaci, Pterocletes, Pygopodes, Rheæ, Saururæ, Steganopodes, Stereornithes, Striges, Struthiones, Tubinares, Zygodactylæ.

Aves.

Hauptabteilungen sind :—

Accipitres, Aepyornithes, Alcæ, Alectorides (einschl. *Cariama*), Anisodactylæ (einschl. Podargidæ und *Steatornis*), Anseres (einschl. Phœnicopteri und Palamediidae), Apteryges, Casuarii, Cocyges, Columbæ, Coraciæ, Crypturi, Cypseli, Dinornithes, Fulicariæ, Gallinæ, Gaviæ, Herodiones, Heterodactylæ, Impennes, Limicolæ, Odontolcæ, Odontormæ, Opisthocomi, Passeres (Familien angeben), Pici, Psittaci, Pterocletes, Pygopodes, Rheæ, Saururæ, Steganopodes, Stereornithes, Striges, Struthiones, Tubinares, Zygodactylæ.

6000-6031 Mammalia.

The principal divisions are :—

Carnivora, Cetacea, Chiroptera, Edentata, Insectivora, Marsupialia, Monotremata, Multituberculata, Primates, Rodentia, Sirenia, Tillo-dontia, Ungulata (Artiodactyla, Perissodactyla, Subungulata).

Mammalia.

Hauptabteilungen sind :—

Carnivora, Cetacea, Chiroptera, Edentata, Insectivora, Marsupialia, Monotremata, Multituberculata, Primates, Rodentia, Sirenia, Tillo-dontia, Ungulata (Artiodactyla, Perissodactyla, Subungulata).

5803-5831 Oiseaux.

Voici les divisions principales :—

Accipitres, *Æpyornithéens*,
 Alciens, Alectorien (y compris les
Cariama), Anisodactyles (y compris
 les Podargides et les *Steatornis*),
 Ansériens (y compris les Phœnico-
 ptères et les Palamédiidés), Aptery-
 giens, Casuariens, Cocygiens,
 Colombins, Coraciens, Crypturiens,
 Cypseliens, Dinornithiens, Fuli-
 cariens, Gallinacés, Gaviens,
 Hérodien, Hétérodactyles, Im-
 pennes, Limicoliens, Odontolciens,
 Odontormiens, Opisthocomes, Pas-
 sereaux (indiquer les familles),
 Pics, Perroquets, Ptérocliens,
 Pygopodes, Rhéens, Saururiens,
 Stéganopodes, Stéréonithiens, Stri-
 giens, Struthioniens, Tubinariens,
 Zygodactyles.

Aves.

Le divisioni principali sono :—

Accipitres, *Æpyornithes*, Alcæ,
 Alectorides (incl. *Cariama*), Aniso-
 dactylæ (incl. Podargidæ et
Steatornis), Anseres (incl. Phœni-
 copteri et Palamediidæ), Apteryges,
 Casuarii, Cocyges, Columbæ,
 Coraciæ, Crypturi, Cypseli, Dinor-
 nithes, Fulicariæ, Gallinæ, Gaviæ,
 Herodiones, Heterodactylæ, Im-
 pennes, Limicolæ, Odontolcæ,
 Odontormæ, Opisthocomi, Passeres
 (indicare le famiglie), Pici, Psit-
 taci, Pterocletes, Pygopodes,
 Rheæ, Saururæ, Steganopodes,
 Stereornithes, Striges, Struthiones,
 Tubinares, Zygodactylæ.

6000-6031 Mammifères.

Voici les divisions principales :—

Carnivores, Cétacés, Chiroptères,
 Édentés, Insectivores, Marsupiaux,
 Monotrèmes; Multituberculés, Pri-
 mates, Rongeurs, Siréniens, Tillo-
 dontes, Ongulés [Ungulata] (Artio-
 dactyles, Périssodactyles, Subon-
 gulés).

Mammalia.

Le divisioni principali sono :—

Carnivora, Cetacea, Chiroptera,
 Edentata, Insectivora, Marsupialia,
 Monotremata, Multituberculata, Pri-
 mates, Rodentia, Sirenia, Tillo-
 dontia, Ungulata (Artiodactyla,
 Perissodactyla, Subungulata).

INDEX

TO

ZOOLOGY (N).

Acanthocephala	1431	Apteryges.. .. .	5831
Acari	3031	Apterygogenca	3600
Acarida	3031	Aquaria	0060
Accipitres	5831	Arachnida	3000
Acclimatisation	0219	Araneida	3031
Acinetaria	0431	Archannelida	1800
Acridiidaë	3831	Arthrodira	5431
Aculeata	4631	Arthropoda	2400
Adaptation	0211	Arthrostraca	2631
Addresses	0040	Artiodactyla	6031
Æpyornithes	5831	Assimilation	0211
Ætiology	0223	Asteroidea	1031
Alcæ	5813	Aves	5800
Aleyonaria	0831	Bassomatophora	2231
Alectorides	5831	Batrachia	5600
Aleurodidaë	4031	Bibliographies	0032
Alimentary System	0207	Biography	0010
Amoebæaë	0431	Bionomic Variations	0223
Ammonidea	2231	Blastoidea	1031
Amphibia	5600	Blattidaë	3831
Amphineura	2231	Blood	0207
Amphioxus	5000	Brachiopoda	2000
Amphipoda	2631	Braconidaë	4631
Anatomy	0207	Breeding	0219
Andrenidaë	4631	Bryozoa	2000
Anisodactylæ	5831	Budding	0215
Anisopoda	2631	Calcareæ	0631
Anomodontia	5631	Cariama	5831
Anoplura	3600	Carnivora	6031
Anseres	5831	Carnosa	0631
Antrophila	4631	Caste, Production of	0211
Anura	5631	Casuarii	5831
Aphaniptera	3600	Caudata	5631
Aphidaë	4031	Cavernicolous Animals	0219
Apidae	4631	Cephalopoda	2231
Apoda	5631	Cephidaë	4631
Apparatus	0090	Cestoda	1231
Aptera	3600	Cetacea	6031
		Chatognatha	1600

Chalastogastra	4631	Dinosauria	5631
Chalcididae	4631	Diplopoda	3431
Cheilostomata	2031	Diploptera	4631
Chelonia	5631	Dipnoi	5431
Chernetida	3031	Diptera	4200
Chilognatha	3431	Dissogony	0215
Chilopoda	3431	Distribution, Geographical ..	0227
Chiroptera	6031	Ecaudata	5631
Choristodera	5631	Echinodera	1600
Chrysididae	4631	Echinodermata	1000
Chyle	0207	Echinoidea	1031
Ciliata	0431	Ectoprocta	2031
Circulatory Organs	0207	Edeniata	6031
Cirripedia	2631	Edriophthalma	2631
Cnidaria	0803	Embiidae	3831
Coccidae	4031	Embryology	0215
Coccidiidea	0431	Enteropneusta	5000
Coccyges	5831	Entomostraca	2631
Coelenterata	0800	Entoprocta	2031
Coelomic Fluid	0207	Environmental Effects	0211
Coleoptera	4300	Ephemeridae	3831
Collected Works	0030	Ethology	0219
Collections	0060	Eurypterida	2800
Collembola	3631	Evaniidae	4631
Colour	0207, 0219	Evolution	0223
— Variations of	0223	Excretory Organs	0207
Columbæ	5831	Explorations	0020
Congresses	0020	Fertility, Variations of	0223
Copepoda	2631	Fertilization, Phenomena ..	0215
Coraciæ	5831	Flagellata	0431
Cotylosauria	5631	Foraminifera	0431
Crinoidea	1031	Forficulidae	3831
Crocodylia	5631	Formicidae	4631
Crosses	0223	Form, Variations of	0223
Crustacea	2600	Fossoria	4631
Cryptostomata	2031	Fulicariæ	5831
Crypturi	5831	Function, Change of	0211
Ctenophora	0831	Gallinæ	5831
Ctenostomata	2031	Ganoidei	5431
Cumacea	2631	Gardens	0060
Cyclostomata	2031	Gastropoda	2231
Cyclostomi	5431	Gastrotricha	1600
Cynipidæ	4631	Gaviæ	5831
Cypseli	5831	Generations, Alternation of ..	0215
Cystoidea	1031	Geographical Zoology	0227
Death	0211	Gephyrea	1800
Decapoda	2631	Glands, Function of	0211
Deep-sea Animals	0219	— Special	0207
Defensive Processes	0219	Gordiidae	1431
Demospongiae	0631	Grafts	0223
Dentition	0207	Graptolites	0831
Dermaptera	3831	Gregarinida	0431
Development	0215	Gregariousness	0219
— Variations of	0223	Gryllidæ	3831
Diaptosauria	5631	Gymnolaema	2031
Dibranchiata	2231	Habitat	0219
Dictionaries	0030	Habits	0219
Dicymidæ	1231	— Variations of	0223
Dinoflagellata	0431	Haemosporidia	0431
Dinornithes	5831	Harmfulness	0060

Heliozoa	0431	Metamorphosis	0215
Hemimeridæ	3831	Methods	0090
Hemiptera	4000	Migration.. .. .	0219
Heredity	0223	Mimicry	0219
Hermaphroditism	0215	Mollusca	2200
Herodiones	5831	Monaxonida	0631
Heterocera	4431	Monotremata	6031
Heterodactylæ	5831	Monticuliporidæ	0831
Heterogyna	4631	Morphology	0207
Heteropoda	2231	Multituberculata	6031
Hexactinellida	0631	Museums	0060
Hibernation	0219	Mycetozoa	0431
Hirudinea	1800	Myology	0207
Histogeny.. .. .	0215	Myriopoda	3400
Histology	0207	Myxospongida	0631
History	0010	Myxosporidia	0431
Holocephali	5431	Myzostomaria	1800
Holothuriodea	1031	Nautiloidea	2231
Homoeotic Variations	0223	Nemathelminthes	1400
Hybrids	0223	Nematoda.. .. .	1431
Hydromedusæ	0831	Nematomorpha	1431
Hymenoptera	4600	Nemertinea	1231
Hyperzoology	0000	Nervous System	0207
Ichneumonidae	4631	Neuroptera	3800
Ichthyosauria	5631	Nomenclature, Principles of	0070
Impennes	5831	Nucleobranchiata	2231
In-breeding	0223	Nudibranchiata	2231
Infusoria	0431	Odonata	3831
Insecta	3500	Odontolæ	5831
Insectivora	6031	Odontormæ	5831
Instinct	0219	Oligochæta	1800
Institutions	0020, 0060	Ontogeny, Postembryonic	0215
Instruments	0090	Onychophora	3200
Isopoda	2631	Oogenesis	0215
Keratosæ	0631	Ophidia	5631
Kinorhyncha	1600	Ophiuroidea	1031
Labyrinthodontia	5631	Opiliones	3031
Lacertilia	5631	Opisthobranchiata	2231
Lamellibranchiata	2231	Opisthocomi	5831
Larval Forms	0215	Organogeny	0215
Lectures	0040	Ornament	0219
Lepidoptera	4400	Ornithosauria	5631
Leptocardii	5000	Orthonectidæ	1231
Leptostraca	2631	Orthoptera	3800
Life, Duration of	0211	Oryssidæ	4631
Limicolæ	5831	Osteology	0207
Linguatulida	2800	Ostracoda	2631
Locustidæ.. .. .	3831	Ostracodermi	5431
Luminosity	0219	Oviposition	0219
Lymph	0207	Ovum	0215
Malacostraca	2631	Pædogenesis	0215
Mallophaga	3600	Palamediidæ	5831
Mammalia	6000	Palpigradi	3031
Mantidæ	3831	Pantopoda	2800
Marsupialia	6031	Parasitica	4631
Mastigophora	0431	Parasitism	0219
Maturity, Variations of	0223	Pareiasauria	5631
Megalyridæ	4631	Parental Relations	0219
Meristic Variations	0223	Parthenogenesis	0215
Mesozoa	1200	Passeres	5831

Pauropoda	3431	Radiolaria	0131
Pedagogy	0050	Regeneration	0215
Pedipalpi	3031	Reproduction	0215
Pelagic Animals	0219	Reproductive Organs	0207
Peleciniidæ	4631	Reptilia	5600
Pelecypoda	2213	Resemblances	0219
Periodicals	0020	Respiration	0211
Peripatus	3231	Respiratory Organs	0207
Perissodactyla	6031	Rheæ	5831
Perlidæ	3831	Rhipidoglossa	2231
Phalangida	3031	Rhiptoglossa	5631
Phasmidæ	3831	Rhizopoda	0431
Phenology	0219	Rhopalocera	4431
Philosophy	0000	Rhynchosauria	5631
Phœnicopteri	5831	Rhynchota	4000
Phoronis	1800	Rhynchocephalia	5631
Phylactolaema	2031	Rodentia	6031
Phyllopoda	2631	Rotifera	1600
Phylogeny	0223	Rudimentary Organs	0207
Physiology	0211	Sarcosporidia	0431
Physopoda	3600	Saururæ	5831
Phytophthires	4031	Scaphopoda	2231
Pici	5831	Schizopoda	2631
Pisces	5400	Scolopendrella	3431
Plagiostomi	5431	Scorpionida	3031
Plankton	0219	Scyphomedusæ	0831
Planipennia	3831	Senescence	0211
Platyhelminthes	1200	Sense, Organs of	0207
Plesiosauria	5631	— — — Function of	0211
Podargidæ	5831	Sessiliventres	4631
Podophthalma	2631	Sex, Production of	0211
Polychæta	1800	Sexual Relations	0219
Polyzoa	2000	Siphonaptera	3600
Porifera	0600	Sirenia	6031
Primates	6031	Siricidæ	4631
Prochordata	5000	Size, Variations of	0223
Procolophonina	5631	Skeletal Structures (internal) of	
Proctotrupidæ	4631	Invertebrates	0207
Proganosauria	5631	Social Relations	0219
Proportions, Variations of	0223	Societies, Reports of	0020
Prosobranchiata	2231	Solifugæ	3031
Protection	0219	Sound Production	0219
Proteomyxa	0431	Spermatogenesis	0215
Protosauria	5631	Spermatozoon	0215
Prototracheata	3200	Sphegidæ	4631
Protozoa	0400	Spongida	0600
Pselaphognatha	3431	Sporozoa	0431
Pseudoscorpiones	3031	Steatornis	5831
Psittaci	5831	Steganopodes	5831
Psocidæ	3831	Stegocephala	5631
Psychology	0219	Stephanidæ	4631
Psyllidæ	4031	Stereornithes	5831
Ptenoglossa	2231	Stomatopoda	2631
Pterocletes	5831	Strepsiptera	4800
Pteropoda	2231	Striges	5831
Pterosauria	5631	Stromatoporidae	0831
Pulmonata	2231	Struthiones	5831
Pygopodes	5831	Stylommatophora	2231
Pythonomorpha	5631	Subungulata	6031
Rachiglossa	2231	Symbiosis	0219

Symphyla.. ..	3431	Trepostomata	2031
Tables	0030	Trichoplax	1231
Taenioglossa	2231	Trichoptera	3800
Tardigrada	2800	Trigonalidae	4631
Taxonomy, General	0231	Trilobita	2800
Technique	0090	Tubinares	5831
Tectibranchiata	2231	Tubulifera	4631
Tegument.. ..	0207	Tunicata	5000
Telegony	0223	Turbellaria	1231
Teleostei	5431	Ungulata	6031
Teleostomi	5431	Urodela	5631
Tenthredinidæ	4631	Utility	0060
Teratological Variations.. ..	0223	Variation	0223
Termitidæ	3831	Vertebrata	5200
Tetractinellida	0631	Vespidæ	4631
Text Books	0030	Vestigial Organs.. ..	0207
Thoracostraca	2631	Voice	0219
Thysanoptera	3600	Xiphosura	2800
Thysanura	3631	Zoantharia	0831
Tillodontia	6031	Zoology, Comprehensive	0000-0231
Time of Appearance, Variations in	0223	— Geographical	0227
Toxoglossa	2231	— Special	0403-6031
Treatises, General	0030	— Topographical	0227
Trematoda	1231	Zygodactylæ	5831

TABLE DES MATIÈRES

POUR LA

ZOOLOGIE (N).

Acanthocéphales	1431	Aptérygiens	5831
Acariens	3031	Aptérygogéniens	3600
Acciptres	5831	Aquaria	0060
Acclimatation	0219	Arachnides	3000
Acinétiens	0431	Aranéides	3031
Acridides	3831	Archiannélides	1800
Aculeata	4631	Arthrodières	5431
Adaptation	0211	Arthropodes	2400
Æpyornithéens	5831	Arthrostracés	2631
Alciens	5831	Artiodactyles	6031
Alcyonaires	0831	Assimilation	0211
Alectorien	5831	Astéroïdes	1031
Aleurodides	4031	Bassomatophores	2231
Ammonites	2231	Batrachiens	5600
Amœbiens	0431	Bibliographies	0032
Amphibies	5600	Biographie	0010
Amphineures	2231	Blastoïdes	1031
Amphioxus	5000	Blattides	3831
Amphipodes	2631	Bourgeonnement	0215
Anatomie	0207	Brachiopodes	2000
Andrénides	4631	Braconides	4631
Animaux cavernicoles	0219	Bryozoaires	2000
— pélagiques	0219	Calcaires	0631
Anisodactyles	5831	Cariama	5831
Anisopodes	2631	Carnivores	6031
Anomodontes	5631	Carnosa	0631
Anoploures	3600	Casuariens	5831
Anoures	5631	Céphalopodes	2231
Ansériens	5831	Céphides	4631
Anthophiles	4631	Cestodes	1231
Aphaniptères	4600	Cétacés	6031
Aphides	4031	Chætognathes	1600
Apides	4631	Chalastogastres	4631
Apodes	5631	Chalcidides	4631
Appareils	0090	Cheilostomes	2031
Aptères	3600	Chéloniens	5631

Chernétides	3031	Durée de la vie	0211
Chilognathes	3431	Echinodères	1600
Chilopodes	3431	Echinodermes	1000
Chiroptères	6031	Echinoïdes	1031
Choristodères	5631	Ectoproctes	2031
Chrysidides	4631	Edentés	6031
Chyle	0207	Edriophthalmes	2631
Ciliés	0431	Elevage	0219
Circulation, Appareil de la	0207	Embiides	3831
Cirripèdes	2631	Embryologie	0215
Cnidaria	0800	Entéropeustes	5000
Coccides	4031	Entomostracés	2631
Coccidiides	0431	Entoproctes	2031
Coccygiens	5831	Ephémérides	3831
Cœlentérés	0800	Ethologie	0219
Coléoptères	4800	Etiologie	0223
Collections	0060	Euryptérides	2800
Collemboles	3631	Evaniides	4631
Columbins	5831	Evolution	0223
Conférences	0040	Excrétion, Organes d'	0207
Congrès	0020	Explorations	0020
Copépodes	2631	Fécondation, Phénomènes de	0215
Coraciens	5831	Fécondité, Variations de	0223
Cotylosauriens	5631	Flagellés	0431
Couleur	0207, 0219	Fonction, Changement de	0211
— Variations de	0223	Foraminifères	0431
Crinoïdes	1031	Forficulides	3831
Crocodiliens	5631	Forme, Variations de	0223
Croisements	0223	Formicides	4631
Crustacés	2600	Fouisseurs	4631
Cryptostomes	2031	Fulicariens	5831
Crypturiens	5831	Gallinacés	5831
Cténophores	0831	Ganoïdes	5431
Cténostomes	2031	Gastropodes	2231
Cumacés	2631	Gastrotriches	1600
Cyclostomes	2031, 5431	Gaviens	5831
Cynipides	4631	Générations alternantes	0215
Cypseliens	5831	Genres, Formation des	0211
Cystoïdes	1031	Géphyriens	1800
Décapodes	2631	Glandes, Fonction des	0211
Défense, Procédés de	0219	— spéciales	0207
Démospóngiaires	0631	Gordiens	1431
Dentition	0207	Graptolites	0831
Dermaptères	3831	Greffes	0223
Développement	0215	Grégarinides	0431
— Variations de	0223	Gryllides	3831
Diaptosauriens	5631	Gymnolèmes	2031
Dibranches	2231	Habitat	0219
Dictionnaires	0030	Habitudes	0219
Dicymidæ	1231	— Variations d'	0223
Dinoflagellés	0431	Haemosporidies	0431
Dinornithiens	5831	Héliozoaires	0431
Dinosauriens	5631	Hémimérides	3831
Diplopodes	3431	Hémiptères	4000
Diploptères	4631	Hérédité	0211
Dipnoïques	5431	Hermaphrodisme	0215
Diptères	4200	Hérodien	5831
Discours	0040	Hétérocènes	4431
Dissogénie	0215	Hétérodactyles	5831
Distribution géographique	0227	Hétérogynes	4631

Hétéropodes	2231	Musées	0060
Hexactinellides	0631	Mycétozoaires	0431
Hibernation	0219	Myologie	0207
Hirudinées	1800	Myriapodes	3400
Histogénie	0215	Myxospongiaires	0631
Histoire	0010	Myxosporidies	0431
Histologie	0207	Myzostomaires	1800
Holocéphales	5431	Nautiles	2231
Holothurioides	1031	Némathelminthes	1400
Hybrides	0223	Nématodes	1431
Hydroméduses	0831	Nématomorphes	1431
Hyménoptères	4600	Némertiens	1231
Ichneumonides	4631	Névroptères	3800
Ichthyosauriens	5631	Nocuité	0060
Impennes	5831	Nomenclature	0070
Infusoires	0431	Nucléobranches	2231
Insectes	3500	Nudibranches	2231
Insectivores	6031	Odonates	3831
Instinct	0219	Odontolciens	5831
Instincts sociaux	0219	Odontormiens	5831
Institutions	0020, 0060	Oeuf	0215
Instruments	0090	Oiseaux	5800
Isopodes	2631	Oligochètes	1800
Jardins	0060	Ongulés	6031
Kératosa	0631	Ontogénie post embryonnaire	0215
Kinorhynques	1600	Onychophores	3200
Labyrinthodontes	5631	Ophiidiens	5631
Lacertiliens	5631	Ophiuroïdes	1031
Lamellibranches	2231	Opilions	3031
Lépidoptères	4400	Opisthobranches	2231
Leptocardiens	5000	Opisthocomes	5831
Leptostracés	2631	Organes rudimentaires	0207
Limicoliens	5831	— tégumentaires	0207
Linguatulides	2800	Organogénie	0215
Liquide de la cavité générale	0207	Ornements	0219
Locustides	3831	Ornithosauriens	5631
Luminosité	0219	Orthonectidae	1231
Lympe	0207	Orthoptères	3800
Malacostracés	2631	Oryssides	4631
Mallophages	3600	Ostéologie	0207
Mammifères	6000	Ostracodermes	5431
Mantides	3831	Ostracodes	2631
Manuels	0030	Ovgenèse	0215
Marsupiaux	6031	Pædogenèse	0215
Mastigophores	0431	Palaméidiés	5831
Maturité, Variations de	0223	Palpigrades	3031
Megalyrides	4631	Pantopodes	2800
Mésozoaires	1200	Parasites	4631
Métamorphose	0215	Parasitisme	0219
Méthodes	0090	Pareiasauriens	5631
Migration	0219	Parenté, Relations de	0219
Milieu, Influence du	0211	Parthénogénèse	0215
Mimétisme	0219	Passereaux	5831
Mollusques	2200	Pauropodes	3431
Monaxonides	0631	Pédagogie	0050
Monotrèmes	6031	Pédipalpes	3031
Monticuliporides	0831	Pélécinides	4631
Morphologie	0207	Pélécy-podes	2231
Mort	0211	Périodiques	0020
Multituberculés	6031	Peripatus	3231

Périssodactyles	6031	Reproduction, Organes de ..	0207
Perlides	3831	Reptiles	5600
Perroquets	5831	Respiration	0211
Phalangides	3031	— Appareil de la	0207
Phasmides	3831	Ressemblance	0219
Phénologie	0219	Rhéens	5831
Philosophie	0000	Rhipidoglosses	2231
Phœnicoptères	5831	Rhoptoglosses	5631
Phoronis	1800	Rhopalocères	4431
Phylactolèmes	2031	Rhynchocéphales	5631
Phyllopoies	2631	Rhynchosaouriens	5631
Phylogénie	0223	Rhynchotes	4000
Physiologie	0211	Rhyzopodes	0431
Physopodes	3600	Rongeurs	6031
Phytophthires	4031	Rotifères	1600
Pics	5831	Sang	0207
Plagiostomes	5431	Sarcosporidies	0431
Planipennes	3831	Saururiens	5831
Plankton	0219	Scaphopodes	2231
Platyhelminthes	1200	Schizopodes	2631
Plésiosaouriens	5631	Scolopendrelles	3431
Podarges	5831	Scorpionides	3031
Podophthalmaires	2631	Scyphoméduses	0831
Poissons	5400	Sénesence	0211
Polychètes	1800	Sens, Organes des	0211
Polyzoaires	2000	— Fonctions des organes des	0207
Ponte	0219	Sessiliventre	4631
Porifères	0600	Sexes, Production des	0211
Porte-Aiguillons	4631	Siphonaptères	3600
Primates	6031	Siréniens	6031
Prochordés	5000	Sirécides	4631
Procolophoniens	5631	Sociétés, Rapports de	0020
Proctotrupides	4631	Solifuges	3031
Proganosaouriens	5631	Sons, Production des	0219
Proportions, Variations de	0223	Spermatogénèse	0215
Prosobranches	2231	Spermatozoïdes	0215
Protection	0219	Sphérides	4631
Protéomyx	0431	Spongiaires	0600
Protosauriens	5631	Sporozoïdes	0431
Prototrachéates	3200	Squelette interne des invertébrés	0207
Protozoaires	0400	Steatornis	5831
Psélaphognathes	3431	Stéganopodes	5831
Pseudoscorpions	3031	Stégocéphales	5631
Psocides	3831	Stéphanides	4631
Psychologie	0219	Stéréornithiens	5831
Psyllides	4031	Stomatopodes	2631
Ptenoglossa	2231	Strepsiptères	4600
Ptérocliens	5831	Strigiens	5831
Ptéropodes	2231	Stromatopores	0831
Ptérosaouriens	5631	Struthioniens	5831
Pulmonés	2231	Stylommatophores	2231
Pygopodes	5831	Subongulés	6031
Pythonomorphes	5631	Symbiose	0219
Rachiglosses	2231	Symphyliens	3431
Radiolaires	0431	Système digestif	0207
Recueils	0030	— nerveux	0207
Régénération	0215	Tables	0030
Relations sexuelles	0219	Taenioglosses	2231
— sociales	0219	Taille, Variations de la	0223
Reproduction	0215	Taxonomie en général	0231

Technique	0090	Trygonalides	4631
Tectibranches	2231	Tubinariens	5831
Télégonie	0223	Tuniciers	5000
Téléostéens	5431	Turbellariés	1231
Téléostomes	5431	Unions consanguines	0223
Tenthréidinides	4631	Urodèles	5631
Termitides	3831	Utilité	0060
Tetractinellides	0631	Variation	0223
Thoracostracés	2631	Vertébrés	5200
Thysanoptères	3603	Vespides	4631
Thysanoures	3631	Voix	0219
Tillodontes	6031	Xiphosures	2800
Toxoglosses	2231	Zoanthaires	0831
Traités généraux	0030	Zoologie générale	0000-0231
Trématodes	1231	—— géographique	0227
Trepostomes	2031	—— spéciale	0400-6031
Trichoplax	1231	—— topographique	0227
Trichoptères	3800	Zygodactyles	5831
Trilobites	2800		

INDEX

ZU

(N) ZOOLOGIE.

Abhandlungen, Allgemeine ..	0030	Anura	5631
Acanthocephala	1431	Aphaniptera	3600-3631
Acari	3031	Aphidæ	4031
Acarida	3031	Apidæ Andrenidæ ..	4631
Accipitres	5831	Apoda	5631
Acinetaria	0431	Apparate	0090
Acridiidae	3831	Aptera	3600-3631
Aculeata	4631	Apteryges	5831
Aehnlichkeiten	0219	Apterygogenea	3600-3631
Æpyornithes	5831	Aquarien	0060
Ætiologie	0223	Arachnida	3000-3031
Akklimatisation	0219	Araneida	3031
Alcæ	5831	Archannelida	1800-1831
Alcyonaria	0831	Arthrodira	5431
Alectorides	5831	Arthropoda	2400-2431
Aleurodidæ	4031	Arthrostraca	2631
Altern	0211	Artiodactyla	6031
Ammonea	2231	Assimilation	0211
Amoebæa	0431	Asteroidea	1031
Amphibia	5631	Atmung	0211
Amphineura	2231	Aves	5800-5831
Amphioxus	5000-5031	Bassomatophora	2231
Amphipoda	2631	Bastardbildung	0223
Anatomie	0207	Batrachia	5600-5631
Andrenidae	4631	Befruchtungs-Phänomene ..	0215
Anisodactylæ	5831	Bibliographien	0032
Anisopoda	2631	Biographien	0010
Anomodontia	5631	Bionomische Variation ..	0223
Anoplura	3600-3631	Blastoidea	1031
Anpassung	0211	Blattidæ	3831
Anseres	5831	Blut	0207
Anthophila	4631	Brachiopoda	2000-2031

Braconidæ	4631	Diplopoda	3431
Bryozoa	2000-2031	Diploptera	4631
Calcarea	0631	Dipnoi	5431
Cariama	5831	Diptera	4200-4231
Carnivora	6031	Dissogonie	0215
Carnosa	0631	Drüsen	0207-0211
Casuarii	5831	Ecaudata	5631
Caudata	5631	Echinodera	1600-1631
Cephalopoda	2231	Echinodermata	1000-1031
Cephidæ	4631	Echinoidea	1031
Cestoda	1231	Ectoprocta	2031
Cetacea	6031	Edentata	6031
Chaetognatha	1600-1631	Edriophthalma	2631
Chalastogastra	4631	Eiablage	0219
Chalcididæ	4631	Embiidæ	3831
Cheilostomata	2031	Embryologie	0215
Chelonia	5631	Endoprocta	2031
Chernetida	3031	Enteropneusta	5000-5031
Chilognatha	3431	Entomostraca	2631
Chilopoda	3431	Entwicklung	0215
Chiroptera	6031	Ephemeridæ	3831
Choristodera	5631	Ernährungs-System	0207
Chylus	0207	Ethologie	0219
Ciliata	0431	Eurypterida	2800-2831
Circulationsorgane	0207	Evaniidæ	4631
Cirripedia	2631	Evolution	0223
Cnidaria	0800-0831	Excretions-Organ	0207
Coccidæ	4031	Farbe	0207, 0219, 0223
Coccidiidea	0431	Festreden	0040
Coccyges	5831	Flagellata	0431
Coelenterata	0800-0831	Forficulidæ	3831
Coelomflüssigkeit	0207	Form	0223
Coleoptera	4800-4831	Formicidæ	4631
Collembola	3631	Fortpflanzung	0215
Columbæ	5831	Forschungsreisen	0020
Copepoda	2631	Fossoria	4631
Coraciæ	5831	Fulicariæ	5831
Cotylosauria	5631	Funktionswechsel	0211
Crinoidea	1031	Gärten	0060
Crocodilia	5631	Gallinæ	5831
Crustacea	2600-2631	Ganoidei	5431
Cryptostomata	2031	Gastropoda	2231
Crypturi	5831	Gastrotricha	1600-1631
Crysididæ	4631	Gaviæ	5831
Ctenophora	0831	Gephyrea	1800-1831
Cumacea	2631	Generationswechsel	0215
Cyclostomata	2031	Geographische Zoologie	0227
Cyclostomi	5431	Geschichte	0010
Cynipidæ	4631	Gesellschaften, Berichte von	0020
Cypseli	5831	Gordiidæ	1431
Cystoidea	1031	Graptolites	0831
Decapoda	2631	Gregarinida	0431
Demospongiae	0631	Grösse	0223
Dermaptera	3831	Gryllidæ	3831
Diaptosauria	5631	Gymnolaema	2031
Dibranchiata	2231	Habitat	0219
Dicymidæ	1231	Haemosporidia	0431
Dinoflagellata	0431	Heerdenleben	0219
Dinornithes	5831	Heliozoa	0431
Dinosauria	5631	Hemimeridæ	3831

Hemiptera	4031	Methoden.. ..	0090
Hermaphroditismus	0215	Mimicry	0219
Herodiones	5831	Mollusca	2200-2231
Heterocera	4431	Monaxonida	0631
Heterodactylæ	5831	Monotremata	6031
Heterogyna	4631	Monticuliporidae	0831
Heteropoda	2231	Morphologie	0207
Heteroptera, Hemiptera	4031	Multituberculata	6031
Hexactinellida	0631	Muscen	0060
Hirudinea	1800-1831	Mycetozoa	0431
Hi-togenie	0215	Myologie	0207
Histologie	0207	Myriopoda	3400-3431
Höhrentiere	0219	Myxospongida	0631
Holocephali	5431	Myxosporidia	0431
Holothuriidea	1031	Myzostomaria	1800-1831
Homoeotische Variation	0223	Nautiloidea	2231
Hydromedusæ	0831	Nemathelminthes	1400-1431
Hymenoptera	4600-4631	Nematoda	1431
Ichneumonidae	4631	Nematomorpha	1431
Ichthyosauria	5631	Nemertinea	1231
Impennes	5831	Nervensystem	0207
Infusoria	0431	Neuroptera	3800-3831
Insecta	3500	Nomenklatur	0070
Insectivora	6031	Nucleobranchiata	2231
Instinkt	0219	Nudibranchiata	2231
Institute	0020, 0060	Nützlichkeit	0060
Instrumente	0090	Odonata	3831
Inzucht	0223	Odontolæ	5831
Isopoda	2631	Odontormæ	5831
Keratosa	0631	Oligochæta	1800-1831
Klassifikation	0231	Ontogenie, postembryonische	0215
Kinorhyncha	1600-1631	Onychophora	3200-3231
Knospenbildung	0215	Oogenesis	0215
Kongresse, Berichte von	0020	Ophidia	5631
Kreuzung	0223	Ophiuroidea	1031
Labyrinthodontia	5631	Opiliones	3031
Lacertilia	5631	Opisthobranchiata	2231
Lamellibranchiata	2231	Opisthocomi	5831
Larvenformen	0215	Organogenie	0215
Lebensdauer	0211	Ornithosauria	5631
Lebensgewohnheiten	0219	Orthonectidæ	1231
Lehrbücher	0030	Orthoptera	3800-3831
Lepidoptera	4400-4431	Oryssidæ	4631
Leptocardii	5000-5031	Osteologie	0207
Leptostraca	2631	Ostracoda	2631
Leuchtvermögen	0219	Ostracodermi	5431
Limicolæ	5831	Ovum	0215
Linguatulida	2800-2831	Pädagogik	0050
Locustidæ	3831	Pædogenesis	0215
Lympe	0207	Palamediidæ	5831
Malacostraca	2631	Palpigradi	3031
Mallophaga	3600-3631	Pantopoda	2800-2831
Mammalia	6000-6031	Parasitica	4631
Mantidæ	3831	Parasitismus	0219
Marsupialia	6031	Pareiasauria	5631
Mastigophora	0431	Parthenogenesis	0215
Megalyridæ	4631	Passeres	5831
Meristische Variation	0223	Paupoda	3431
Mesozoa	1200-1231	Pedipalpi	3031
Metamorphose	0215	Pelagische Tiere	0219

Peleciniidæ	4631	Reptilia	5600-5631
Pelecypoda	2231	Respirationsorgane	0207
Periodica	0020	Rheæ	5831
Peripatus	3231	Rhipidoglossa	2231
Perissodactyla	6031	Rhoptoglossa	5631
Perlidae	3831	Rhizopoda	0431
Pfropfen	0223	Rhoplocera	4431
Phänologie¹	0219	Rhynchocephalia	5631
Phalangida	3031	Rhynchosauria	5631
Phasmidæ	3831	Rhynchota	4000-4031
Philosophie	0000	Rodentia	6031
Phœnicopteri	5831	Rotifera	1600-1631
Phoronis	1800-1831	Rudimentäre Organe	0207
Phylactolaema	2031	Sammelwerke	0030
Phyllopoda	2631	Sammlungen	0060
Phylogenie	0223	Sarcosporidia	0431
Physiologie	0211	Saururæ	5831
Physopoda	3600-3631	Scaphopoda	2231
Phytophthires	4031	Schädlichkeit	0060
Pici	5831	Schizopoda	2631
Pisces	5400-5431	Schmuck	0219
Plagiostomi	5431	Schutzmittel	0219
Planipennia	3831	Scolopendrella	3431
Plankton	0219	Scorpionida	3031
Platyhelminthes	1200-1231	Sceyphomedusæ	0831
Plesiosauria	5631	Sessiliventres	4631
Podargidae	5831	Sexuelle Beziehungen	0219
Podophthalmata	2613	Sinnesorgane	0207, 0211
Polychæta	1800-1831	Siphonaptera	3600-3631
Polyzoa	2000-2031	Sirenia	6031
Porifera	0600-0631	Siricidæ	4631
Postembryonale Ontogenie	0215	Solifugæ	3031
Primates	6031	Soziale Beziehungen	0219
Prochordata	5000-5031	Spermatogenesis	0215
Procolophonia	5631	Spermatozoon	0215
Proctotrupidæ	4631	Sphegidæ	4631
Proganosauria	5631	Spongida	0600-0631
Proportionen	0223	Sporozoa	0431
Prosobranchiata	2231	Steatornis	5831
Proteomyxa	0431	Steganopodes	5831
Protosauria	5631	Stegocephala	5631
Prototracheata	3200-3231	Stephanidæ	4631
Protozoa	0400-0431	Stereornithes	5831
Pselaphognatha	3431	Stimme	0219
Pseudoscorpiones	3031	Stomatopoda	2631
Psittaci	5831	Strepsiptera	4800-4831
Psocidæ	3831	Striges	5831
Psychologie	0219	Stromatoporidæ	0831
Psyllidæ	4031	Structur	0207
Ptenoglossa	2231	Struthiones	5831
Pterocletes	5831	Stylommatophora	2231
Pteropoda	2231	Subungulata	6031
Pterosauria	5631	Symbiose	0219
Pulmonata	2231	Symphyla	3431
Pygopodes	5831	Tabellen	0030
Pythonomorpha	5631	Taeniglossa	2231
Rachiglossa	2231	Tardigrada	2800-2831
Radiolaria	0431	Taxonomie	0231
Regeneration	0215	Technik	0090
Reproduktive Organe	0207	Tectibranchiata	2231

Tegument.. ..	0207	Trilobita	2800-2831
Telegonie	0223	Tubinares.. ..	.. 5831
Teleostei	5431	Tubulifera .. ..	.. 4631
Teleostomi	5431	Tunicata	5000-5031
Tenthredinidae	4631	Turbellaria .. ..	.. 1231
Teratologische Variation	0223	Ungulata .. ..	.. 6031
Termitidae	3831	Urodela .. ..	.. 5631
Tetractinellida	0631	Variation .. ..	.. 0223
Thoracostraca	2631	Vererbung .. ..	.. 0223
Thysanoptera	3600-3631	Vertebrata	5200-5231
Thysanura	3631	Verteidigung .. ..	.. 0219
Tiefsee-Tiere	0219	Vespidæ .. ..	.. 4631
Tillodontia	6031	Vorträge .. ..	.. 0040
Tod	0211	Wanderung .. ..	.. 0219
Topographische Zoologie	0227	Winterschlaf .. ..	.. 0219
Toxoglossa	2231	Wörterbücher .. ..	.. 0030
Trematoda	1231	Xiphosura	2800-2831
Trepostomata	2031	Zahnbildung .. ..	.. 0207
Trichoplax	1200-1231	Zoantharia .. ..	.. 0831
Trichoptera	3800-3831	Züchtung .. ..	.. 0219
Trigonalidae	4631	Zygodactylæ .. ..	.. 5831

INDICE

PER LA

ZOOLOGIA (N).

Abissali, Animali delle zone ..	0219	Apidæ	4631
Abitudini	0219	Apoda	5631
— Variazioni di	0223	Apparato	0090
Acanthocephala	1431	Aptera	3600
Acari	3031	Apteryges	5831
Acarida	3031	Apterygogenea	3600
Accipitres	5831	Aquaria	0060
Acclimatazione	0219	Arachnida	3000
Acinetaria	0431	Araneida	3031
Acridiidæ	3831	Archannelida	1800
Aculeata	4631	Arthrodira	5431
Adattamento	0211	Arthropoda	2400
Æpiornithes	5831	Arthrostraca	2631
Alcæ	5831	Artiodactyla	6031
Alcyonaria	0831	Assimilazione	0211
Alectorides	5831	Asteroidea	1031
Aleurodidae	4031	Aves	5800
Alimentare, Apparecchio ..	0207	Bassomatophora	2231
Allevamento	0219	Batrachia	5600
Ambiente, Effetti dell' ..	0211	Bibliografie	0032
Ammonidae	2231	Biografia	0010
Amoebæa	0431	Bionomiche, Variazioni ..	0223
Amphibia	5600	Blastoidea	1031
Amphineura	2231	Blattidæ	3831
Amphioxus	5000	Brachiopoda	2000
Amphipoda	2631	Braconidæ	4631
Anatomia	0207	Bryozoa	2000
Andrenidae	4631	Calcareæ	0631
Anisodactylæ	5831	Cariama	5831
Anisopoda	2631	Carnivora	6031
Anomodontia	5631	Carnosa	0631
Anoplura	3600	Caste, Produzione di ..	0211
Anseres	5831	Casuarii	5831
Anthophila	4631	Caudata	5631
Anoura	5631	Cavernicoli, Animali ..	0219
Aphaniptera	3600	Celomatico, Liquido ..	0207
Aphidæ	4031	Cephalopoda	2231

Cephidæ	4631	Dipnoi	5431
Cestoda	1231	Diptera	4200
Cetacea	6031	Discorsi	0040
Chaetognatha	1600	Dissogonia	0215
Chalastogastra	4631	Distribuzione geografica.. .. .	0227
Chalcididæ	4631	Durata della Vita	0211
Cheilostomata	2031	Ecaudata	5631
Chelonia	5631	Echinodera	1600
Chernetida	3031	Echinodermata	1000
Chilo	0207	Echinoidea	1031
Chilognatha	3431	Entoprocta	2031
Chilopoda	3431	Ephemeridæ	3831
Chiroptera	6031	Epoca d'apparizione, Variazioni di	0223
Choristodera	5631	Eredità	0223
Chrysididæ	4631	Ermafroditismo	0215
Ciliata	0431	Escretori, Organi	0207
Circolazione, Organi della	0207	Esplorazioni	0020
Cirripedia	2631	Etiologia	0223
Cnidaria	0800	Etologia	0219
Coccidæ	4631	Eurypterida	2800
Coccidiidea	0431	Evaniidæ	4631
Coccyges	5831	Evoluzione	0223
Celenterata	0800	Fecondazione, Fenomeni di	0215
Coleoptera	4800	Fecondità, Variazioni di	0223
Collembola	3631	Fenologia	0219
Collezioni	0060	Filogenia	0223
Colore	0207, 0219	Filosofia	0000
— Variazioni di	0223	Fisiologia	0211
Columbæ	5831	Flagellata	0431
Congressi	0020	Foraminifera	0431
Consanguineità	0223	Forficulidæ	3831
Copepoda	2631	Forma, Variazioni di	0223
Coraciæ	5831	Formicidæ	4631
Cotylosauria	5631	Fossoria	4631
Crinoidea	1031	Fulicariæ	5831
Crocodilia	5631	Funzione, Cambiamento di	0211
Crustacea	2600	Gallinæ	5831
Cryptostomata	2031	Ganoidei	5431
Crypturi	5831	Gastropoda	2231
Ctenophora	0831	Gastrotricha	1600
Ctenostomata	2031	Gaviæ	5831
Cumacea	2631	Gemmazione	0215
Cyclostomata	2031	Generazioni, Alternanza delle	0215
Cyclostomi	5431	Gephyrea	1800
Cynipidæ	4631	Giardini	0060
Cypseli	5831	Glandule, Funzioni delle	0211
Cystoidea	1031	— speciali	0207
Decapoda	2631	Gordiidæ	1431
Demospongiae	0631	Graptolites	0831
Dentizione	0207	Gregarii, Istinti	0219
Dermaptera	3831	Gregarinida	0431
Dibranchiata	2231	Gryllidæ	3831
Dicymidæ	1231	Gymnolaema	2031
Difensivi, Processi	0219	Habitat	0219
Dimensione, Variazioni di	0223	Haemosporidia	0431
Dinoflagellata	0431	Heliozoa	0431
Dinornithes	5831	Hemimeridæ	3831
Dinosauria	5631	Hemiptera	4000
Diplopoda	3431	Herodiones	5831
Diploptera	4631		

Heterocera	4431	Monticuliporidae	0831
Heterodactylæ	5831	Morfologia	0207
Heterogyna	4631	Morte	0211
Heteropoda	2231	Multituberculata	6031
Hexactinellida	0631	Musei	0060
Hirudinea	1800	Myriopoda	3400
Holocephali	5431	Myxospongida	0631
Holothuriodea	1031	Myxosporidia	0431
Hydromedusæ	0831	Myzostomaria	1800
Hymenoptera	4600	Nautiloidea	2231
Ibernazione	0219	Nemathelminthes	1400
Ibridi	0223	Nematoda	1431
Ichnæumonidæ	4631	Nematomorpha	1431
Ichthyosauria	5631	Nemertinea	1231
Impennes	5831	Nervoso, Sistema	0207
Incrociamenti	0223	Neuroptera	3800
Infusoria	0431	Nocività	0060
Innesti	0223	Nomenclatura, Principi di	0070
Insecta	3500	Nucleobranchiata	2231
Insectivora	6031	Nudibranchiata	2231
Iperzoologia	0000	Odonata	3831
Isopoda	2631	Odontolæ	5831
Istinto	0219	Odontormæ	5831
Istituzioni	0020, 0060	Oligochætæ	1800
Istogenia	0215	Omeotiche, Variazioni	0223
Istologia	0207	Ontogenia postembrionale	0215
Istrumenti	0090	Onychophora	3200
Keratosa	0631	Oogenesi	0215
Kinoryncha	1600	Ophidia	5631
Labyrinthodontia	5631	Ophiuroidea	1031
Lacertilia	5631	Opiliones	3031
Lamellibranchiata	2231	Opisthobranchiata	2231
Lepidoptera	4400	Opisthocomi	5831
Leptocardii	5000	Organogenia	0215
Leptostraca	2631	Ornamenti	0219
Lezioni	0040	Ornithosauria	5631
Limicolæ	5831	Orthonectidæ	1231
Linfa	0207	Orthoptera	3800
Linguatulida	2800	Oryssidæ	4631
Locustidæ	3831	Osteologia	0207
Luminosità	0219	Ostracoda	2631
Mallophaga	3600	Ostracodermi	5431
Malocostraca	2631	Oviposizione	0219
Mammalia	6000	Palamediidæ	5831
Mantidæ	3831	Palpigradi	3031
Manuali	0030	Pantopoda	2800
Marsupialia	6031	Parasitica	4631
Mastigophora	0431	Parasitismo	0219
Maturità, Variazioni di	0223	Pareiasauria	5631
Megalyridæ	4631	Parentali, Rapporti	0219
Meristiche, Variazioni	0223	Partenogenesi	0215
Mesozoa	1200	Passeres	5831
Metamorfosi	0215	Pauropoda	3431
Metodi	0090	Pedagogia	0050
Migrazione	0219	Pedipalpi	3031
Mimetismo	0219	Pedogenesi	0215
Miologia	0207	Pelagici, Animali	0219
Mollusca	2200	Pelecínidæ	4631
Monaxonidæ	0631	Pelecypoda	2231
Monotremata	6031	Periodici	0020

Peripatus	3231	Rhynchosauria	5631
Perissodactyla	6031	Rhynchota	4400
Perlide	3831	Rhynchocephalia	5631
Phalangida	3031	Rigenerazione	0211
Phasmodæ	3831	Riproduttivi, Organi	0207
Phœnicopteri	5831	Riproduzione	0215
Phoronis	1800	Rodentia	6031
Phylactolaema	2031	Rotifera	1600
Phyllopoda	2631	Rudimentali, Organi	0207
Physopoda	3600	Sangue	0207
Phytophthires	4031	Sarcosporidia	0431
Pici	5831	Saururæ	5831
Pisces	5400	Scaphopoda	2231
Plagiostomi	5431	Scheletriche, Strutture interne, degli invertebrati	0207
Planipennia	3831	Schizopoda	2631
Plankton	0219	Scolopendrella	3431
Platyhelminthes	1200	Scorpionida	3031
Plesiosauria	5631	Scyphomedusæ	0831
Podargidæ	5831	Senescenza	0211
Podophthalma	2631	Senso, Organi di	0207
Polychæta	1800	—— — Funzione degli	0211
Polyzoa	2000	Sessi, Produzione dei	0211
Porifera	0600	Sessiliventes	4631
Primates	6031	Sessuali, Rapporti	0219
Prochordata	5000	Simbiosi	0219
Procolophonia	5631	Siphonaptera	3600
Proctotrupidæ	4631	Sirenia	6031
Proganosauria	5631	Siricidæ	4631
Proporzioni, Variazioni di	0223	Sociali, Rapporti	0219
Prosobranchiata	2231	Società, Resoconti di	0020
Proteomyxa	0431	Solifugæ	3031
Protezione	0219	Suoni, Produzione di	0219
Protosauria	5631	Spermatogenesi	0215
Prototrachenta	3200	Spermatozoide	0215
Protozoa	0400	Sphegidæ	4631
Pselaphognatha	3431	Spongida	0600
Pseudoscorpiones	3031	Sporozoa	0431
Psicologia	0219	Steatornis	5831
Psittaci	5831	Steganopodes	5831
Psocidæ	3831	Stegocephala	5631
Psyllidæ	4031	Stephanidæ	4631
Pterocletes	5831	Stereornithes	5831
Ptenoglossa	2231	Stomatopoda	2631
Pteropoda	2231	Storia	0010
Pterosauria	5631	Strepsiptera	4800
Pulmonata	2231	Striges	5831
Pygopodes	5831	Stromatoporidae	0831
Pythonomorpha	5631	Struthiones	5831
Raccolte	0030	Stylommatophora	2231
Rachiglossa	2231	Subungulata	6031
Radiolaria	0431	Sviluppo	0215
Rassomiglianze	0219	—— Variazioni di	0223
Reptilia	5600	Symphyla	3431
Respirazione	0211	Taenioglossa	2231
—— Organi della	0207	Tavole	0030
Rhesæ	5831	Tardigrada	2800
Rhipidoglossa	2231	Tassonomia generale	0231
Rhaptoglossa	5631	Tecnica	0090
Rhizopoda	0431	Tectibranchiata	2231
Rhopalocera	4431		

Tegumento	0207	Tubinares.. .. .	5831
Telegonia	0223	Tubulifera	4631
Teleostei	5431	Tunicata	5000
Teleostomi	5131	Turbellaria	1231
Tenthredinidæ	4631	Ungulata	6031
Teratologiche, Variazioni	0223	Uovo	0215
Termitidæ	3831	Urodela	5631
Tetractinellida	0631	Utilità	0060
Thoracostraca	2631	Variazione	0223
Thysanoptera	3600	Vertebrata	5200
Thysanura	3631	Vespidæ	4631
Tillodontia	6031	Vestigio, Organi in	0207
Toxoglossa	2231	Voce	0219
Trattati generali	0030	Xiphosura	2800
Trepostomata	2031	Zoantharia	0831
Trematoda	1231	Zoologia comprensiva	0000-0231
Trichoplax	1231	—— geografica	0227
Trichoptera	3800	—— topografica	0227
Trigonalidæ	4631	Zygodactylæ	5831
Trilobita	2800		

I. COMPREHENSIVE ZOOLOGY

ARRANGED BY

D. SHARP

This section includes works that deal with more than one branch of Zoology, or that are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one subject included in it. The special records complete each subject. A few memoirs included in the special records are repeated in this division.

CONTENTS

	PAGE
I. TITLES	4
II. SUBJECT-INDEX:—	
Hyperzoology :—	
Philosophical=0000	35
Historical=0010 :	
History	36
Biography, Obituary notices	36
Periodicals, Reports, Congresses=0020	36
General Treatises, Text-books=0030	36
Bibliography=0032	37
Addresses, Lectures, &c.=0040	37
Pedagogy=0050	37
Institutions, Museums, Economic=0060	37
Nomenclature=0070	38
Methods, Technique=0090	39

Morphology=0207—

PAGE

General	..	..	..	..	..	..	39
Histology	..	..	..	..	..	..	40
Tegument and special glands (vacant)							
Skeleton (vacant)							
Nervous system, Sense-organs	..	..	..	..	..	..	40
Myology	..	..	..	..	..	..	40
Alimentary system, Blood (vacant)							
Vascular system	..	..	..	..	..	..	40

Physiology=0211—

General	..	..	..	..	..	..	40
Cytological. Protoplasm and cell	..	..	..	..	..	..	40
Sex	..	..	..	..	..	..	41
Parthenogenesis	..	..	..	..	..	..	41
Metabolic. Metamorphosis	..	..	..	..	..	..	41
Function	..	..	..	..	..	..	41
Environment, Adaptation	..	..	..	..	..	..	41
Regeneration, Grafting	..	..	..	..	..	..	42
Senescence, Death (vacant)							
Chemical	..	..	..	..	..	..	42

Development=0215—

General	..	..	..	..	..	..	42
Ovum, oogenesis	..	..	..	..	..	..	42
Spermatozoon, spermatogenesis	..	..	..	..	..	..	42
Chromosomes	..	..	..	..	..	..	42
Fertilization	..	..	..	..	..	..	43
Embryology. Organogeny	..	..	..	..	..	..	43
Experimental embryology	..	..	..	..	..	..	43

Ethology=0219—

General	..	..	..	..	..	..	43
Phenology	..	..	..	..	..	..	43
Migration	..	..	..	..	..	..	43
Food-habits	..	..	..	..	..	..	44
Parental (vacant)							
Sexual (vacant)							
Social	..	..	..	..	..	..	44
Hibernation	..	..	..	..	..	..	44
Luminosity	..	..	..	..	..	..	44
Parasitism	..	..	..	..	..	..	44
Voice (vacant)							
Habitat	..	..	..	..	..	..	44
Speleology	..	..	..	..	..	..	44
Movement	..	..	..	..	..	..	45
Psychology	..	..	..	..	..	..	45
Colour. Defensive processes	..	..	..	..	..	..	46
Acclimatisation (vacant)							

	PAGE
Aetiology and Variation=0223—	
General	45
Variation, Mutation.. .. .	46
Teratology	46
Hybrids. Telegony	46
Heredity	46
Evolution. Origin of species	47
Geography=0227—	
General	48
Expeditions. Travels (vacant)	
Faunae:—	
Europe and Mediterranean	48
Asia	50
Africa	50
North America	51
South America	51
Australasia	51
Arctic	51
Atlantic	51
Indian Ocean (vacant)	
Antarctic	52
Taxonomy=0231	52

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II.—SUBJECT INDEX.

The author's name and the number refer to Titles, where the full reference will be found.

HYPERZOOLOGY.

Philosophical. **0000**
Sull' origine della vita; Arcangeli, **16**.

Kritisches Referat über H. Driesch, Philosophie des Organischen; Becher, **43**.

Le transformisme et l'expérience; Caullery, **107**.

La genèse des espèces; Cuénot, **144**.

Die Biologie als selbständige Grundwissenschaft und das System der Biologie; Driesch, **175**.

Was ist ein „höherer Organismus“ ? ; **Franz**, 221.

Zur Lebenslauftheorie ; **Freytag**, 226.

Philosophie zoologique (Russ.) ; **Lamarck**, 380.

Extinction des espèces ; **Larger**, 385.

La stabilité de la vie ; **Le Dantec**, 388.

Évolution et la génération spontanée ; **Leduc**, 390.

La lutte pour l'existence ; **Regnault**, 537.

Variabilità filogenetica ; **Rosa**, 555.

L'individuo e la specie ; **Raffaele**, 532.

Concetto di specie ; **Raffaele**, 533.

Entwicklung des Artbegriffes ; **Tschermak**, 654.

Convergence ; **Wille**, 684.

History, Biography. 0010

History.

Storia degli Zoologi italiani ; **Camerano**, 97.

Progressi della Biologia in Italia ; **Grassi**, 259.

Buffon and the problem of species ; **Lovejoy**, 416.

The founder of the evolution theory ; **Cox**, 140.

Darwin's early doubts ; **Judd**, 340.

Darwin und Patrick Matthew ; **May**, 435.

Animals in indian materia medica ; **Hooper**, 322.

Die Tiere im antiken und modernen Aberglauben. Schluss (Russ.) ; **Klinger**, 356.

Fauna of Homer ; **Moulé**, 472.

Biography.

Agassiz, Alexander: life and work ; **Murray**, 476.

Beecher, Charles Emerson, with bibliography ; **Dall**, 151.

Bonelli, concetti evoluzionistici ; **Camerano**, 96.

Brooks, William Keith ; **Conklin**, 135 ; also *J. Exp. Zool.* 9 1910 pp. 1-52 3 port.

Cavolini, Filippo ; **Camerano**, 98.

Coues, Elliott, biographical memoir of, with bibliography ; **Allen**, 7.

Dohrn, Anton ; **Boveri**, 75.

Gabb, William More, with bibliography ; **Dall**, 150.

Albert Gaudry and the evolution of the animal kingdom ; **Glangeaud**, 246.

Alfred Giard et son œuvre ; **Bohn**, 67.

Lamarck, der Begründer der Lehre vom Stammbaum ; **Hadži**, 273.

Lo Bianco, Salvatore ; **Raffaele**, 534.

Denis de Montfort ; **Vaillant**, 656.

Pallas und der Stammbaum der Organismen ; **Thienemann**, 634.

Schwann, Theodor ; **Bosch**, 73 ; **Hertwig & Waldeyer**, 303.

Stearns, R. E. C., Bibliography ; **Stearns**, 603.

Periodicals, Reports, Congresses, etc. 0020

Ein halbes Jahrhundert Gesellschaft für Salzburger Landeskunde ; **Widmann**, 683.

Festschrift des Vereines in Wien ; **Toula**, 647.

Expédition Polaire Russe ; **Toll**, 645.

General Treatises, Text-Books, etc. 0030

Zoologisches Wörterbuch ; **Bresslau & Ziegler**, 84.

Wörterbuch der Biologie ; **Schmidt**, 570.

Klassen und Ordnungen des Tierreichs ; **Bronn**, 87.

Cavolini, Opere ; **Cavolini**, 109.

Cœuvres diverses réunies ; **Giard**, 239.

Charles Nodier naturaliste, œuvres ; **Magnin**, 425.

Schaudinn's Arbeiten ; **Schaudinn**, 566.

Darwin. Autoris. deutsche Uebersetzung v. Maria Semon ; **Darwin**, 155.

Compendio di Zoologia ; **Emery**, 191.

Zoologia ad uso del Liceo ed Istituto tecnico; **Enriques**, 193.

Text-book general zoology; **Herrick**, 299.

Allgemeine Zoologie; **Hertwig**, O., 302.

Lehrbuch der Zoologie. 1-te Lief. Einleitung und Protozoa (Russ.); **Hertwig**, R., 304.

Trattato di Zoologia; **Hertwig**, R., 305.

The animals and man: Elementary text book, zoology and physiology; **Kellog**, 350.

Course of zoology; **Lameere**, 381.

Lehrbuch der Zoologie (Holländisch); **Vosmaer**, 666.

Zoologia ad uso delle Scuole tecniche; **Cavanna**, 108.

Zoologie und vergleichenden Anatomie für Studierende der Medizin und Veterinärmedizin; **Brandt**, 77.

Lehrbuch der Zoologie für Studierende; **Boas**, 61.

Wirbellosen Tiere; **Böhmig**, 63.

Bibliography. 0032

Zoological Record; **Sharp**, 591.

Zoologischer Jahresbericht 1910; **Mayer**, 438.

Bibliographia Zoologica; **Field**, 207.

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Jahresbericht . . . Medizin; **Waldeyer & Posner**, 670.

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Bibliografia zoologica italiana; **Chiarugi & Ficalbi**, 116.

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Zoologia e scienza delle formazioni organizzate; **Giardina**, 240.

Ziele und Aufgaben der experimentellen Zoologie; **Pax**, 495.

Position of zoology in Chile; **Philippi**, 503.

Zersplitterung der zoologischen Zeitschriftenliteratur; **Poche**, 511.

Lectures on biology; **Thesing**, 633.

Magnalia naturae, presidential address; **Thompson**, 641.

Zoologie au début du xx. siècle; **Zograf**, 699.

Pedagogy. 0050

Teaching of zoology and its improvement; **Baumgartner**, 38.

Die Behandlung des Planktons im Schulunterricht; **Hanstein**, 279.

Biologie und Unterricht; **Hertwig**, 307.

Skizzen und Schemata für den zoologisch-biologischen Unterricht; **Jan-son**, 335.

Oekologisch-etholog. Wandtafeln zur Zoologie; **Matzdorff**, 433.

Lehrbuch der Biologie für Hochschulen; **Nussbaum, Karsten & Weber**, 486.

Kursus der Zoologie für höhere Lehranstalten (Trans. to Russ.); **Shipley & McBride**, 593.

Institutions, Museums, Economic. 0060

Care of types; **Cockerell**, 128.

Marine Laboratory in Jamaica; **Andrews**, 11 & 12.

North Dakota Biological Station; **Bannon, 79.**

The Fairport biological station; **Coker, 131.**

Seewasseraquarium der Landesausstellung in Capodistria; **Cori, 138.**

The Biological Laboratory at Cold Spring Harbor, New York; **Davenport, 157.**

Zoological institutions, Europe; **Flower, 212.**

Illinois Biological Station; **Forbes, 217.**

Geschichte des Studiums der Zoologie an der Universität zu Kristiania (Norweg.); **Gran, 258.**

Zoologischer Akklimatisationsgarten von Falz-Fein (Russ.); **Ivanov, 332.**

Zoologischer Garten von Faltz-Fein (Russ.); **Malyšev, 426.**

Liste des animaux qui ont vécu à la ménagerie de Versailles; **Loisel, 415.**

Zoologische Abteilung des steiermärkischen Landesmuseum; **Mark-tanner-Turneretscher, 428.**

The Marine Laboratory of the Carnegie Institution, Florida; **Mayer, 437.**

Station zoologique d'Endoume à Marseille; **Ménégaux, 443.**

Station zoologique de Cette; **Ménégaux, 444.**

Akklimatisations stationen und Gärten Transkaukasiens (Russ.); **Tichomirov, 643.**

Bericht über die biologische Station in Kielkond auf Oesel; **Schneider, Taube & Stoll, 572.**

Natural History Museum, London; **Pycraft, 525.**

Museum Düsseldorf; **Wenck, 679.**

Weltnaturschutz; **Sarasin, 565.**

Biologische Gruppen; **Fritze, 230.**

Organisation des Musées d'Histoire Naturelle et de Physiographie (Polish); **Raciborski, 530.**

Ueber das Zähmen von Tieren (Russ.); **Engelmeier, 192.**

Bericht vom dem Institute für Phytopathologie in 1908; **Ritzema-Bos, 551.**

Zoology medicinal, manual; **Castellani & Chalmers, 103.**

Lehrbuch der medizinischen Zoologie. 3-te Ausg. (Russ.); **Nikolskij, 483.**

Parasitology; **Ward, 674.**

Attacks of parasites on agricultural plants, Denmark; **Mortensen, Rostrup & Ravn, 471.**

Verbreitung von Krankheiten durch Insekten- und Zecken-Stiche (Russ.); **Marcinovsky, 430.**

Ueber die mit der Einführung neuer Tierarten verbundene Gefahr (Holländisch); **Dammerman, 153.**

Nomenclature. 0070

Against strict priority; **Mortensen, 470.**

Nomenclature; **Needham, 477, 478 & 479.**

On the transference of names in zoology; **Calman, 95.**

Modernisierung der seitherigen binären Nomenklatur; **Rhumler, 543.**

Motive und Ziele der modernen Nomenklaturbewegung; **Poche, 510.**

Weiterbildung der Linne'schen Nomenklatur (Ungarisch); **Kertész, 352.**

Simplification dans la nomenclature; **Fejérváry, 206.**

Report of the International Commission on Zoological Nomenclature; **Stiles, 614.**

Opinions rendered by the International commission on zoological nomenclature. Opinions 1 to 25. Smithsonian Inst. Publ. No. 1938 1910 (1-61). Opinions 26 to 29. *op. cit.* No. 1989 1910 (63-68). Opinions 30 to 37. *op. cit.* No. 2013 1911 (69-88).

Symbols, nomenclature; **Ward, 673.**

Nomenklatur; **Ziegler, 695.**

Special committees on zoological nomenclature; **Stiles, 615.**

Practical nomenclature; **Cockerell, 129.**

Numerical nomenclature; **Holland, 318.**

Numerals for specific names; **Jordan, 338.**

The use of symbols in zoological nomenclature; **Girault**, 242.

Genotype; **Stiles**, 616; **Townsend**, 648a; **Bather**, 37.

Typenbestimmung von Gattungen; **Hendel**, 294.

Falsche oder zweifelhafte Benennungen; **Fritsch**, 229.

Protest, Nomenklatur; **Reitter**, 539.

The Article 30 (g); **Stiles**, 617.

Noms des familles et des sous-familles du Règne animal; **Horváth**, 323.

Technique, Methods. 0090

Grundzüge der mikroskopischen Technik; **Lee & Mayer**, 391.

Zoologisches Praktikum; **Schuberg**, 578.

Die biocentrische Forschung; **Dahl & Hanstein**, 148.

Tecnica microscopica; **Carazzi & Levi**, 100.

Mikrotechnischer Fixiertrog; **Breckner**, 81.

Vereinfachte Celloidin-Entkalkungsmethode; **Bödecker**, 62.

Métrophotographie; **Chappellier**, 113.

Kolorierung makroskopisch-anatomischer Präparate; **Escher**, 195.

Kernfärbung an unfixierten Zellen; **Rost**, 560.

Methode zur Rekonstruktion von Schnittserien; **Odhner**, 488.

Microchimica del fosforo; **Arcangeli**, 17.

Vitale metachromatische Färbung mit Sulforhodamin (Russ.); **Andrejev**, 10.

Anwendung der Osmiumsäure; **Schultze**, 582.

Konservieren in Flüssigkeiten; **Selmons**, 590.

Leitfaden für das mikroskopisch-zoologische Praktikum; **Stempell**, 609.

Über die Cajal'sche Versilberungs- und die Apáthy'sche Nachvergoldungsmethode (Ungarisch); **Szűts**, 624.

Plasmafärbung und Versilberung (Ungarisch); **Szűts**, 625.

Démonstration, appareil réticulaire interne des cellules nerveuses; **Golgi**, 253.

Neue Methode zum Photographieren lebender Zellen (Russ.); **Favorskij**, 205.

Apparat zur Dunkelfeldbeleuchtung; **Reichert**, 538.

Chloralphénol pour le montage; **Langeron**, 384.

Montage et naturalisation des grands animaux; **Lacomme**, 379.

Vetri copri-oggetti azzurri; **Pignatari**, 507.

Précautions à prendre dans la récolte, la conservation et l'envoi des animaux venimeux; **Phisalix**, 504.

Neue Apparate zur qualitativen und quantitativen Erforschung der Bodenfauna der Seen; **Ekman**, 187.

Ein Planktonfangapparat und eine Flasche zu Temperaturmessungen; **Clodi**, 126.

Self-closing plankton net; **Kofoed**, 360.

Un nouveau petit filet pour les péches planktoniques; **Monti**, 460.

Aufstellung von Planktonpräparaten; **Taienemann**, 636.

Aquarium für Lehrzwecke (Russ.); **Emeljanenko**, 188.

MORPHOLOGY. 0207

General. Miscellaneous.

Cytology *vide* Physiology.

Bedeutung des Kopfes; **Simroth**, 595.

Teilkörpertheorie; **Heidenhain**, 292.

Asymmetrie-Versuche als Schlüssel zum Bilateralitäts-Probleme; **Przi-
bram**, 520.

Klassifikation der Stützgewebe; **Studnicka**, 623.

La morphologie dynamique; **Houssay**, 324.

Bau des Protoplasmas (Russ. + deutsch. Rés.); **Lepeškin**, 398.

Adrenalgewebe bei Wirbellosen; **Biedl**, 59.

Action du sulfate de magnésie en solution concentrée sur quelques protoplasmas; **Fauré-Frémiet**, 201.

Mémoire de M. A. Perroncito présenté par M. Chatton; **Fauré-Frémiet**, 202.

Histology.

Bausubstanzen; **Studnička**, 622.

Intercellularbrücken in alcuni epiteli; **Luna**, 417.

Muskelfasern der Flimmerzellen, Entwicklung (Russ.); **Korotnev**, 373.

Die Henneguy-Lenhosséksch Theorie; **Erhard**, 194.

Granulations leucocytaires étudiées à l'ultramicroscope; **Achard & Ramond**, 4.

Nervous system. Sense organs.

Dottrina del neurone; **Golgi**, 252.

Neue Lehre über das Centralnervensystem; **Rádl**, 531.

Fixation of the central nervous system; **Møllgaard**, 452.

Réseau interne de Golgi; **Legendre**, 394.

Zellgestalt, Plateausche Flüssigkeitsfigur und Neurofibrille; **Bethe**, 57.

Myology.

Zusammenhang zwischen Sarkolemm und Muskelfaser und dem Streifen; **Ponomarewa**, 515.

Vascular system.

Darstellung des Verlaufs der Blutgefäße; **Rost**, 559.

Glands, Blood, Lymph. [Vacant.]

PHYSIOLOGY. 0211

General. Miscellaneous.

Le néovitalisme et la physiologie générale; **Gley**, 247.

Vergleichende Physiologie; **Pütter**, 521.

Beziehungen zwischen Struktur und Funktion; **Asher**, 21.

Physiological animal geography; **Shelford**, 592.

La sensibilisation et la désensibilisation; **Bohn**, 65.

Physiologische Ursache von Zeichnung und Farbe; **Kobelt**, 357.

Pigmente und deren Bedeutung (Russ.); **Birukov**, 60.

Sur la survie des cellules en dehors de l'organisme; **Jolly**, 337.

Conservation des cellules nerveuses hors de l'organisme; **Legendre & Minot**, 396.

Formation de nouveaux prolongements hors de l'organisme; **Legendre & Minot**, 395.

Survie des cellules isolés de l'organisme; **Legendre**, 393.

Sterility; **Morse**, 469.

Cytology.

For various papers on chromosomes see Development.

La cellule, sa structure et sa vie; **Chatin**, 114.

Plasma und Zelle; **Heidenhain**, 291.

Die Zelle u. die Gewebe. Bd 1 (Russ.); **Hertwig**, 304.

Beobachtungen auf dem Gebiete der Zelle; **Stauffacher**, 662.

On the nature of the canalicular apparatus of animal cells; **Bensley**, 50.

Bütschli'schen Gel-Theorie; **Liesegang**, 403.

Division de la cellule; **Dehorne**, 161.

Merokinesis; **Reuter**, 541a.

Grundlagen der Zellvermehrung und der Involutionerscheinungen bei der Entwicklung (Russ.); **Eismond**, 186.

Wesen und Vorkommen der Determination der Zellteilung; **Gurwitsch**, 266.

Zur Kenntnis der Mechanik der Kernteilungsfiguren; **Baltzer**, 24 & 25.

Chromatindiminution als allgemeine Erscheinung reifender Zellen; **Rohde**, 552.

Wimperapparat und Mitose von Flimmerzellen; **Gutheil**, 267.

Plasmastrukturen, Chondriosomen und Chromidien; **Schaxel, 567.**

Formazione e dissoluzione dei cromosomi; **Valle, 657.**

Mitochondrie; **Fauré-Frémiet, 199.**

Mitochondries, chromidies, appareil réticulaire, cellules spermatiques; **Peroncito, 499 & 500.**

Eigenschaft der Chondriosomen (Russ.); **Korotnev, 372.**

Condriodieresi e formazione della membrana cellulare divisoria; **Comes, 134.**

Centrosomen, Sphären und achromatischen Figuren; **Tschassownikow, 653.**

Genese der Granula in den Drüsenzellen; **Schultze, 581.**

Fusions nucléaires sans caractère sexuel; **Bonnet, 72.**

Sex.

Recent work on the determination of sex; **Doncaster, 173.**

Differenziazione del sesso; **De-Gregorio, 159.**

Geschlechtsbestimmung; **Fischer, 209.**

Beeinflussung des Geschlechts; **Fraenkel, 218.**

Determination of sex; **Thomson, 642.**

Heterochromosomen - Forschung, nebst Bemerkungen zum Problem der Geschlechtsdifferenzierung; **Gutherz, 268.**

Geschlechtsbestimmende Faktor; **Kowalewsky, 374.**

Are particular chromosomes sex determinants?; **Montgomery, 459.**

Geschlechtbestimmende Ursachen; **Strasburger, 619.**

Is the female frog heterozygous in regard to sex-determination?; Review of recent work; **Morgan, 465.**

Parthenogenesis.

Progenèseparthénogénétique à longue échéance; **Hérouard, 298.**

Phénomènes de parthénogénèse naturelle et de parthénogénèse expérimentale; **Lécaillon, 386.**

(v-9186 g)

Parthénogénèse expérimentale; **Delage, 162.**

Metabolic.

Die Aufnahme, Verarbeitung und Assimilation der Nahrung; **Biedermann, 58.**

Nährwert der im Wasser gelösten Stoffe; **Kerb, 351.**

Ernährung der Wassertiere durch gelöste organische Verbindungen; **Pütter, 522.**

Ferments protéolytiques; **Sellier, 589.**

Exkretion; **Burian, 92.**

Fonction éliminatrice des phagocytes; **Bruntz & Spillmann, 90.**

Rôle excréteur des cellules néphrocytes; **Bruntz, 89.**

Ueber das Verhalten verschiedener Wassertiere zum Sauerstoffgehalt; **Hazegawa, 284.**

Activité peroxydasique; **Fleig, 210 & 211.**

Coloration vitale des leucocytes, signification physiologique; **Bruntz & Spillmann, 91.**

Function.

Physiologie des Nervensystems; **Baglioni, 22.**

Physiologie du sens olfactif et tactile d'animaux marins; **Baglioni, 23.**

Demonstrationen, Physiologie des Sehorgans; **Hess, 308.**

Aktive Oberfläche und Organfunktion; **Pütter, 522.**

Kinematographische Tierfluges; **Wachsmuth, 667.**

Flugorganen; **Merton, 446.**

Secretive und absorptive Funktion der Darmzellen bei Wirbellosen; **Jordan, 339.**

Rôle éliminateur des leucocytes; **Spillmann & Bruntz, 600.**

Environment. Adaptation.

See also Evolution.

Über die Art, wie aussere Einflüsse den Aufbau des Tieres abändern; **Tornier, 646.**

Anpassungsvermögen einiger Tiere;
Bens, 49.

L'influenza dell' ambiente sul periodo
reproduttivo; **Lo Bianco, 404.**

Einfluss der Dürre; **Otto, 492.**

Direkt induzierte Farbanpassungen
und deren Vererbung; **Kammerer, 344, 347.**

Regeneration. Grafting.

Regeneration und Involution;
Barfurth, 26 & 27.

Regulatory processes; **Child, 118.**

Central nervous system and re-
generation; **Goldfarb, 249 & 250.**

Die physiologische Isolation von
Teilen des Organismus als Auslösungs-
faktor der Bildung neuer Lebewesen
und der Restitution; **Child, 117.**

Regeneration, Transplantation;
Thesing, 632.

Tissue differentiation and rate of
growth during regeneration; **Allen, 8.**

Rate of regeneration; **Durbin, 182.**

Rate of regeneration; **Zeleny, 692, 693, 694.**

Transplantationen, wissenschaftliche
Bedeutung (Norweg.); **Broch, 86.**

Pedal laceration in actinians, with
bibliography; **Cary, 101.**

Chemical.

Jahresbericht über die Fortschritte
der Tier-Chemie oder der physiologi-
schen, pathologischen und Immuno-
Chemie und der Pharmakologie. Hrsg.
v. Rud[olf] **Andreasch** und Karl **Spiro**.
Bd 39 über das Jahr 1909. Red. von
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Bergmann) 1910 (vi + 1476). 24 cm.

Colour in animals; **Hickson, 311.**

Physiologische Chemie: Verbreitung
des Chitins in Tierreich, Chitin; **Wester, 682.**

Tierische Gifte; **Faust, 204.**

Versuche an niederen Tieren über
die verschiedenartige Beeinflussung des
neuromuskulären und des ciliaren Be-
wegungsapparates durch Chemikalien;
Mayer, 436.

DEVELOPMENT. 0215

Regeneration; *vide* Physiology.

General.

Entwicklungsmechanik; **Triepel, 650.**

Korrelation in der Bildung selbstän-
diger Skeletelemente und das Problem
der Gestaltbildung in einheitlichen
Protoplasamassen; **Becher, 42.**

O. Hertwig's ontogenetisches Kau-
salgesetz; **Heider, 293.**

Les feuillets embryonnaires et la
théorie des mutations; **Schimkewitsch, 568.**

Origin of the sex-cells of *Amia* and
Lepidosteus, with bibliography; **Allen, 6.**

Spermatophore, and the theory of
the alternation of generations in
animals; **Downing, 174.**

How can the process underlying
membrane formation cause the develop-
ment of the egg?; **Loeb, 405.**

Oogenesis, Spermatogenesis.

Chromosomes.

Die Biologie des Eies, als eine
chemisch-anatomische Koordination;
Diamare, 168.

Oogenese bei den Metazoa, Organisa-
tion der Eizelle (Russ.); **Bogojav-
lenskij, 64.**

Ovum et sperma; **Retzius, 540 & 541.**

On the formation, significance and
chemistry of the white and yellow yolk
of ova; **Riddle, 548.**

A propos du travail de M. Duesberg
sur l'appareil mitochondrial des cellules
sémiales; **Mollé, 454.**

Two kinds of spermatozoa in Phyl-
loxerans; **Morgan, 462.**

Biologie der Zelle; **Perroncito, 498.**

Réduction plasmatique dans la sper-
matogénèse de l'*Ascaris*; **Romieu, 554.**

Chromosomes, general considera-
tions; **Wilson, 687.**

Variation du nombre des chromo-
somes dans la segmentation de l'œuf
non fécondé; **Lécaillon, 387.**

Chromosomes in the parthenogenetic and sexual eggs of phylloxerans and aphids; **Morgan**, 463.

Accessory chromosomes, man; **Guyer**, 270.

Nombre des chromosomes dans les larves parthénogénétiques; **Dehorne**, 160.

Fertilization.

Entwicklungserregung; **Godlewski**, 248.

Auf welcher Weise rette die Befruchtung das Leben des Eies?; **Loeb**, 407.

Autolysis of fertilized and unfertilized eggs; **Lyon & Shackell**, 418.

The sex chromosomes; **Wilson**, 686.

Increased permeability of sea urchin eggs following fertilization; **Lyon & Shackell**, 419.

Embryology.

Homologien in der Embryonal- und ersten Jugendzeit; **Kehrer**, 349.

Vergleichendembryologische Studien; **Faussek**, 203.

L'anatomie et l'embryologie comparée des vers et des groupes voisins; **Beauchamp**, 40.

Wirkung der Geschlechtsdrüsen auf die Entwicklung der sekundären Sexualcharaktere. (Ungarisch); **Gorka**, 254.

Kurzer Leitfaden der Embryologie (Russ.); **Michaelis**, 447.

Experimental embryology.

Vide etiam Parthenogenesis p. 41.

Methods of artificial parthenogenesis; **Harvey**, 282.

Artificial parthenogenesis; **Harvey**, 283.

The effects of centrifugal force upon the organization and development of eggs, *Pulmonata*; **Conklin**, 136.

Wirkung ununterbrochenen Centrifugierens auf die Entwicklung und die Ausbildung der Organ (Russ.); **von Stein**, 605.

Le problème de la fécondation circonscrit par l'imprégnation sans amphimixie et la parthénogénèse traumatique; **Bataillon**, 32-36.

Parthénogénèse expérimentale; **Henneguy**, 295.

Die Radiumkrankheit tierischer Keimzellen; **Hertwig**, O., 300.

Einwirkung des Radiums; **Tur**, 654a.

Mesothoriumversuche an tierischen Keimzellen; **Hertwig**, O., 301.

Effects produced by cutting *Paramaecium* cells, with bibliography; **Calkins**, 94.

Beeinflussung der Entwicklung durch Basen; **Loeb & Wasteneys**, 409 & 410.

ETHOLOGY. 0219

General.

La paléontologie éthologique; **Dollo**, 171.

Gebrauch von Werkzeugen im Tierreich; **Hoffmann**, 315.

Der Organismus als Handlung; **Schultz**, 580.

Nature sketches in temperate America; **Hancock**, 277.

Beobachtungen aus der niederen Tierwelt in Bilderserien; **Bartels**, 29.

Die Biologie des Inundationsgebietes der unteren Donau und des Donaudeltas; **Antipa**, 13.

Lebensgewohnheiten einiger Acariden und Wasserinsekten (Russ.); **Zolotnickij**, 700.

Phenology. Hibernation.

Observations phénologiques; **Hawrysiewicz**, 288.

Conduite des observations phénologiques (Polish); **Kołodziejczyk**, 367.

Hibernation; **Cleghorn**, 124.

Il letargo; **Polimanti**, 513.

Migration.

Wandern und Umherziehen einiger Tiere in Russland (Russ.); **Jablonskij**, 333.

Geologische Erklärung des Wasser-scheidengesetzes und Folgerungen aus demselben; **Kowarzik**, 375.

Food-habits.

The valuation of the sea; **Petersen & Jensen**, 502.

Parental. Sexual. (Vacant.)

Social.

Società animali; **Canestrini**, 99.

Die sozialen Erscheinungen im Tierreich; **Freund**, 225.

Symbiosis; **Théel**, 630; **Keeble**, 348a.

La parabiosi; **Morpurgo**, 467 & 468.

Hibernation.

Cleghorn, 124.

Luminosity.

Light and the behavior of organisms; **Mast**, 431.

Biophotogenèse; **Dubois**, 180 & 181.

Organismenleuchten; **Weitlaner**, 678.

Why do certain living forms produce light?; **McDermott**, 422 & 423; **McDermott & Crane**, 424.

Habitat.

Including Plankton general.

For local Plankton *see* Geography.

Les Broméliacées comme milieu biologique; **Picado**, 508.

Fauna der Leichen; **Strauch**, 620.

Fauna der Blumentöpfe (Norweg.); **Lie-Pettersen**, 402.

Le déterminisme des changements de milieu; **Rabaud**, 528.

Zoocécidies et leur origine; **Cotte**, 140.

Cecidologischer Beitrag; **Geisenheyner**, 236.

Origine entomologique d'un grand nombre de prétendues zoocécidies; **Cotte**, 141.

Marine ecology; **Miner**, 451.

Das Leben im Ozean nach Zählungen seiner Bewohner; **Hensen**, 297.

Lebt das Tier in derselben Tiefe, wo es gefangen wird (Ungarisch); 397.

Die Tiefsee-Expedition des „Michael Sars“ nach dem Nordatlantik; **Hjort**, 313.

Entstehung der Seemarschen; **Schütte**, 579.

The annual history of a periodic pond; **Murray**, 475.

Wege und Ziele der modernen Meeresforschung; **Bolau**, 70.

Methodik der Plankton-Untersuchung; **Hensen**, 296.

Wesenberg-Lund's Planktontheorie (Ungarisch); **Abonyi**, 3.

Planktonkunde; **Steuer**, 610.

Temporalvariationen der Planktonorganismen; **Thienemann**, 637.

Die Beziehungen des Kleinplanktons zum Chemismus der Gewässer; **Kolkwitz**, 366.

Die chemische Zusammensetzung und das biologische Verhalten der Gewässer; **König, Kuhlmann und Thienemann**, 359.

Entstehung des Potamoplanktons; **Brehm**, 82.

Biologie und Geographie des Süßwasserplanktons; **Wesenberg-Lund**, 680.

Précis biologique du plankton d'eau douce; **Wesenberg-Lund**, 681.

Süßwasser-Plankton; **Zacharias**, 691.

Nannoplankton und Zentrifugierung; **Lohmann**, 413.

Kammerplankton des Süßwassers und der Meere; **Kolkwitz**, 364.

Schlammbildendes Plankton; **Kolkwitz**, 365.

Spleology.

Peuplement des cavernes; **Rabaud**, 527.

Catalan cave zoology; **Faura**, 198.

Parasitism.

Parasitologie et technique parasitologique; **Galli-Valerio**, 233.

Parasitismus und Parasiten (Russ.); **Graff und Linstow**, 257.

Parasitersnachweis Mittels der Komplementablenkungsmethod; **Busson**, 93.

Gehalt von Eingeweidewürmern an peptolytischen Fermenten; **Abderhalden**, 1.

Parasitologische Notizen vom Wilde; **Stroh**, 621.

Parassiti ematici, scoperte recenti filogenia; **Bertarelli**, 56.

Parasiten von *Calanus finmarchicus*; **Apstein**, 15.

Parasiten der Vögel des Ural; **Clerc**, 125.

Animaux parasites ou commensaux de Madréporaires; **Gravier**, 260.

Movement.

Action de la chaleur et du froid sur l'activité motrice; **Matisse**, 432.

Psychology. Tropisms.

Revue annuelle des travaux de psychologie zoologique; **Bohn & Drzewina**, 69.

Literature on animal psychology published in France during the year 1910; **Bohn**, 68.

Literature for 1910 on the behavior of lower invertebrates; **Holmes**, 320.

Tierpsychologische Umschau; **Braess**, 76.

Neuere Schriften über Tierpsychologie; **Hanstein**, 278.

Methoden der Beobachtungen und Versuche; **Claparede**, 120.

Tierpsychologie (Ungarisch); **Révész**, 542.

Die Tierpsychologie, ein Zweig der Zoologie; **Dahl**, 149.

Beziehungen der vergleichenden Anatomie zur vergleichenden Psychologie; **Edinger**, 185.

Seele, Handlung und Zweckmässigkeit im Reich der Organismen; **Becher**, 44.

Objektive Kriterien des Psychischen; **Schneider**, 574.

Problèmes relatifs à l'activité des animaux inférieurs; **Bohn**, 66.

The significance of tropisms for psychology; **Loeb**, 466.

L'étude expérimentale de l'anticipation adaptative; **Piéron**, 506.

Rhythmical movements; **Haseman**, 286.

Periodische Bewegungen, Zusammenhang mit Licht- und Stoffwechsel; **Menke**, 445.

Phototaxis; **Franz**, 222, 223, 224.

Farbensinn; **Uhlenhuth**, 655.

Verhältnis zwischen modal verschiedenen Reizen; **Szymanski**, 626.

Willkürliche Bewegungen eines Tieres; **Dexler & Fröschl**, 167.

The relative values of the different curves of learning; **Hicks**, 310.

Die Entstehung des Denkvermögens; **Dexler**, 166.

Geistigen Fähigkeiten des Menschen und der Tiere; **Greppin**, 262.

Mensch und Tier in psychischer Hinsicht; **Schneider**, 575.

Instincts; **Wooster**, 688.

Instinct; **Washburn**, 675.

Instinct; **Read**, 535.

Instinkt; **Demoll**, 164.

Action du cyanure de potassium; **Drzewina**, 177, 178: **Drzewina & Behn**, 179.

Tierseele; **Wundt**, 689.

Colour. Defensive processes.

Concealing coloration; **Thayer**, 629.

Biologische Entwicklung der Mimik; **Bechteren**, 45 & 46.

Antica osservazione e interpretazione dei mimetismi; **Cattaneo**, 106.

Psychologique du mimétisme; **Rabaud**, 529.

AETIOLOGY AND VARIATION.

0223

Vide etiam Hyperzoology-0000.

General.

Theory of inheritance and evolution; **Hagedoorn**, 276.

Natürliche Schöpfungsgeschichte; **Haeckel**, 274.

Génétique mendélienne et génétique lamarckienne; **Landrien**, 382.

Neuere Literatur über Lamarck und Lamarckismus; **May**, 434.

Théories de Lamarck; **Regnault**, 536.

Vererbung und Artbildung; **Gross**, 264.

Konvergierende Entwicklungsreihen (Norweg.); **Broch**, 85.

Konvergente Züchtung; **Arlt**, 19.

Paläontologie, moderne Systematik und Stammesgeschichte; **Arlt**, 20.

Paläontologie, Systematik und Descendenzlehre; **Dacqué**, 147.

Pleodorina californica cycle évolutif et sa signification phylogénique; **Chatton**, 115.

Reversion; **Davenport**, 156.

Primitive animals; **Smith**, 597a.

Variation.

Variabilität und Modifikabilität; **Fruwirth**, 231.

Mécanismes de la variation des races; **Gautier**, 235.

Grösse der Variabilität; **Peter**, 501.

Polygones de variation et courbe normale de fréquence; **Traynard**, 649.

Les feuillets embryonnaires et la théorie des mutations; **Schimkewitsch**, 568.

Production of mutants; **Loeb & Bancroft**, 408.

Epistasis in der Artbildung (Ungar.); **Méhely**, 440 & 441.

Origin, sudden, of new types; **Oswald**, 491.

“Mutations,” “Rectigradations”; **Osborn**, 489.

Mutations évolutives; **Bouvier**, 74.

Recherches expérimentales sur l'étendue des variations et des facteurs tératogènes; **Collin**, 133.

Teratology.

Abnormitäten als Wegweiser der Abstammungslehre (Ungar.); **Méhely**, 439.

Doppelbildungen des Menschen und der Tiere; **Hübner**, 325.

Hybrids. Telegony.

Lois rationnelles de l'hybridisme; **Giglio-Tos**, 241.

Nomenclatur der Hybriden (Russ.); **Ivanov & Poll**, 331.

Mischlingskunde; **Poll**, 514.

Germinal analysis through hybridization; **Shull**, 594.

Heredity in hybrids; **Newman**, 481.

Telegonie; **Kohlbrugge**, 362.

Heredity.

Heredity; **Doncaster**, 172.—**Walker**, 671.—**Weinberg**, 676.

Einführung in die experimentelle Vererbungslehre; **Baur**, 39.

Allgemeine Vererbungslehre; **Haecker**, 275.

Erblichkeitsforschung; **Johannsen**, 336.

Vererbungsstudien; **Lang**, 383.

Vererbungsproblem; **Prowazek**, 518.

La substance héréditaire et la base cellulaire de l'hérédité; **Prenant**, 517.

Mnemonische Entstehung affektiver Neigungen; **Rignano**, 550.

Die Mneme; **Semon**, 585.

Chromosomen als Vererbungsträger; **Ziegler**, 696.

Zuchtversuche zur Abstammungslehre; **Kammerer**, 345.

Mendel and following work; **Verh. Ver. Brunn** 49.

Mendel und seine Vererbungslehre; **Kammerer**, 348.

Les lois de Mendel; **Guyénot**, 269.

Mendelian theory of heredity and the augmentation of vigor; **Bruce, 88.**

Mendelism; **Punnett, 524.**

Coupling vs. random segregation; **Emerson, 189.**

Dominance and the modification of behavior in alternative (Mendelian) inheritance; **Tower, 648.**

Spiegler's "white melanin" as related to dominant or recessive white; **Gortner, 255.**

Simbiosi ereditaria; **Pierantoin, 505.**

Inheritance of fecundity; **Pearl, 497.**

Heredity of skin pigmentation in man; **Davenport & Davenport, 158.**

Les déterminants de la couleur chez les souris; Etude comparative; **Cuénot, 145.**

The influence of heredity and of environment in determining the coat colors; **Morgan, 464.**

Mendelian ratio among yellow mice; **Castle & Little, 105.**

Heredity of the race-characters univoltinism and bivoltinism in the silk-worm; **McCracken, 421.**

L'hérédité de la sensibilité à la greffe cancéreuse; **Cuénot & Mercier, 146.**

Vererbung erworbener Eigenschaften; **Fischer, 208.**—Hérédité des caractères acquis; **Le Dantec, 389.**—Vererbung erworbener Eigenschaften; **Kammerer, 343, 346, 347.**—Trasmissibilità dei caratteri acquisiti; **Rignano, 549.**—Erworbene Eigenschaften; **Semon, 586 & 587.**

Direkt induzierte Farbanpassungen und deren Vererbung; **Kammerer, 344, 347.**

Anpassung im Tierreich und ihre Beziehungen zur Vererbung; **Hesse, 309.**

Getrennte Vererbung der Geschlechter; **Meijere, 442.**

Sex-limited inheritance; **Hadley, 272.**

Sex-limited inheritance; **Pearl & Surface, 496.**

The effect of selection upon Mendelian characters manifested in one sex only; **Castle, 104.**

Evolution. Origin of Species.

Die Abstammungslehre. Zwölf gemeinverständliche Vorträge über die Deszendenztheorie im Licht der neueren Forschung. Gehalten von O. Abel [u. A.]. Jena (G. Fischer) 1911 (iv + 489). 24 cm. 11 M.

Die Bedeutung der fossilen Wirbeltiere für die Abstammungslehre; **Abel, 2.**

Evolution of simplest forms; **Minchin, 450a.**

Evolution; **Bergson, 53.**

Factors in evolution; **Bernard, 55.**

Tiergeographie und Abstammungslehre; **Brauer, 80.**

Die Entwicklungstheorien; **Delage & Goldsmith, 163.**

Die Stellung der modernen Wissenschaft zu Darwins Auslesetheorie; **Doflein, 170.**

Gewebeentwicklung und Phylogenese; **Ebner, 184.**

Die Entwicklungstheorie im Lichte der Tatsachen; **Frank, 219.**

Moderne Gesichtspunkte in der Abstammungslehre; **Franz, 220.**

Indirizzo dell' evoluzionismo; **Gemelli, 238.**

Origine delle specie e evoluzionismo; **Gemelli, 237.**

Die Artbildung im Licht der neueren Erblichkeitslehre; **Goldschmidt, 251.**

Einleitung in die Abstammungslehre; **Hertwig, 306.**

Das Aussterben der Arten und Gattungen; **Hoernes, 314.**

Evolution, historical sketch; **Judd, 341.**

Das biogenetische Grundgesetz; **Kohlbrugge, 361.**

Vergleichenden Anatomie und Entwicklungsgeschichte und die Abstammungslehre; **Maas, 420.**

A method to test the hypothesis of selective fertilization; **Morgan, Payne & Browne, 466.**

Entstehung der Arten und natürliche Auslese (Russ.); **Ostroumov, 490.**

Pathologie und Artbildung; **Pro-wazek, 519.**

Natural selection; **Russel, 561.**

Einführung in die Deszendenztheorie; **Schneider, 573.**

Abstammungslehre; **Steinmann, 607.**

Die kambrische Fauna; **Steinmann, 608.**

Darwinism (Russ.); **Wallace, 672.**

Selezione naturale; **Ziegler, 697.**

The measurement of natural selection; **Harris, 280.**

The selective elimination of organs; **Harris, 281.**

GEOGRAPHY.

0227

General.

Die Feststellung von Entwicklungsgebieten und Verbreitungszentren; **Aridt, 18.**

Über die Beziehungen zwischen Fortpflanzung und Verbreitung mariner Tierformen; **Appellöf, 14.**

Physiological animal geography; **Shelford, 592.**

Cosmopolitisme des animaux d'eau douce; **Zograf, 698.**

Deutschen Tiefsee-Expedition auf dem Dampfer „Valdivia“; **Chun, 119.**

Atlas of Zoogeography; **Bartholomew, 31.**

Kulturpflanzen und Haustiere; **Hehn, 290.**

The narrowing circle of the animal kingdom; **Eason, 183.**

†Migration and shifting of Devonian faunas; **Williams, 685.**

Die Veränderungen des Klimas seit dem Maximum der letzten Eiszeit. Eine Sammlung von Berichten . . . herausg. von dem Exekutiv-Komitee des 11. internationalen Geologenkongresses. Stockholm Generalstabens litografiska anstalt 1910 (lviii + 459) pls. and maps.

Faunae.

Including Plankton local.

Europe.

d

Cecidien Mittel- und Nordeuropas; **Ross, 558.**

Die Tiefseefauna der Seen Mitteleuropas; **Zschokke, 701.**

Scandinavia, Denmark. da

†Norway, Kristiania area, new Devonian fauna; **Kiær, 353.**

Sweden, Falköping; **Bergström, 54.**

Sweden, Frostvik mountain; **Klinekowström, 355.**

Denmark, post-glacial climatic changes; **Nordmann, 484.**

†Late-quaternary history of Gotland; **Munthe, 474.**

The plankton on a submarine bank; **Paulsen, 493.**

Xerothermic relics in the steppe fauna of Öland (Swedish); **Wahlgren, 668.**

Russian Empire. db

Faune de la Russie et des pays limitrophes fondée sur les collections du Musée Zoologique de l'Académie Imp. des Sciences à St. Pétersbourg. Pisces. Vol. I. (Russ.); *vide* Pisces, **Berg, 18.**

Geologische und palaeontologische Literatur über Bessarabien (Russ.); **Mogilianskij, 453.**

Fauna der Kalmukensteppen (Russ.); **Pavlinov, 494.**

†Fauna der Kaspischen Ablagerungen an der unteren Wolga (Russ.); **Pravoslavlev, 516.**

†Fauna der oberen Kreide und des Palaeocäns der Krim; **Sloudsky, 597.**

Kama und Wischera (Russ.); **Berg, 51 & 52.**

Faune de quelques lacs de l'Oural; **Fuhrmann & Thiébaud, 232.**

Tierische Reste im Grunde von Seen der Gouv. Novgorod (Russ.); **Hülsen, 326.**

†Kalkstein, Orenburg; **Janischewsky, 334.**

Zooplankton des Sees Pestovo (Russ.); **Lichačev, 401.**

Fauna von Südwest-Transkaukasien (Russ.); **Nesterov, 480.**

Plankton der transuralischen Seen (Russ.); **Novikov, 485.**

Fauna des Bassins der Fl. Kama u. Wischera (Russ.); **Siuzev, 596.**

†Fauna des Famennien von Kielce-Sandomierz (Russ. + rés. franç.); **Sobolew**, 598.

†Fauna der Sarmatischen Schichten von Wolhynien (Russ.); **Spuliskij**, 601.

Plancton der Gewässer von Jamal, dessen Charakter (Russ.); **Voronkov**, 663.

Plankton der Flüsse Russlands (Russ.); **Voronkov**, 664.

Plankton-fauna einiger Seen und Flüsse (Russ.); **Voronkov**, 665.

Zusammensetzung und Ursprung der Kaukasischen Fauna (Russ.); **Bar-tenev**, 30.

German empire. *de*

Die Süßwasserfauna Deutschlands. Eine Exkursionsfauna, bearb. v. Böhmig [u. a.] . . . u. hrsg. v. August **Brauer**. H. 16. Jena (G. Fischer) 1911 (iv + 116). 20 cm. 4 M.

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Verzeichnis der Schriften über deutsche *Zooecidien*; **Thomas**, 640.

Dem Verzeichnis der schlesischen Gallen; **Dittrich & Schmidt**, 169.

Zoogeographische, Südwestdeutschland; **Hilzheimer**, 312.

Fauna vom Gestein; **Holdhaus**, 317.

Biologie der Talsperren, bei Remscheid; **Kolkwitz**, 363.

Zooecidien Deutschlands; **Küster**, 377.

Fauna einiger Halligen; **Leege**, 392.

Zoologische Literatur des Rheinischen Schiefergebirges; **le Roi**, 399.

Fauna des Vereinsgebietes; **le Roi**, 400.

Plankton der deutschen Nordsee-Terminfahrten; **Mielck**, 450.

Fauna der Vogesen; **Schmidt**, 569.

Zooecidien, Cassel; **Schulz**, 583.

Seen des Rhinluchs; **Seligo**, 588.

Glazialrelikte der heimischen Süßwasserfauna; **Thienemann**, 635.

Hydrobiologische westfälischen Talsperren; **Thienemann**, 638.

Untersuchung der Eifelmaare; **Thienemann & Voigt**, 639.

Burgbrohl Exkursionen; **Voigt**, etc., 662.

Beiträge zur Brackwasserfauna im Frischen Haß; **Vanhöffen**, 658.

Fauna des Herzogtums Sachsen-Meiningen; **Weiss**, 677.

Belgium. *dd*

Belgique, Variations du climat; **Rutot**, 564.

British Islands. *de*

†Bristol coalfield; **Bolton**, 71.

Hastings, annual notes on the local Fauna; **Bloomfield** pp. 304-310 *Hastings Natural*, 1.

Dorset, phenology; **Richardson**, 545.

France. *df*

Faune et flore des Pyrénées considérées au point de vue de l'influence du milieu; **Belloc**, 48.

Note sur la flore des quais et bateaux de Boulogne-sur-Mer; **Cépède**, 111.

Protection de la faune française et des animaux acclimatés; **Chappellier**, 112.

Guide des naturalistes d'Elbeuf; **Coulon**, 142.

La forêt de Fontainebleau envisagée comme milieu biologique; **Dalmon**, 152.

Plancton de la baie de La Hougue; **Fauré-Frémiet**, 200.

Plancton des eaux douces de la Loire-Inférieure; **Labbé**, 378.

Etude biologique de la Colme (Nord); **Schodduyn**, 577.

Italy. *dh*

Fauna dell' isola di Pianosa nell'Adriatico; **Cecconi**, 110.

Valle del Brenta, Cecidi; **Cobau**, 127.

Galle della Valtellina; **Corti**, 139.

Philippi, R. A., lettera ed elenco dei suoi lavori scientifici riguardanti la Sicilia; **Gregorio**, 261.

Introduzione allo studio biologico del Verbano; **Marchi**, 427.

Fauna del lago craterico di Astroni; **Monticelli**, 461.

Switzerland.

di

Zoogeographischen Analyse der Fauna der Alpenseen; **Brehm**, 83.

Tiefenfauna des Brienzer und des Thuner Sees; **Hofsten**, 316.

Seen der Faulhornkette im Berner Oberland; **Steiner**, 606.

Austria.

dk

Fauna der nördlichen Adria; **Cori**, 137.

Zooplankton-Studien über den Teich in Janów bei Lemberg (Polish); **Faczyński**, 196.

Zooplankton-Studien des Teiches in Brzeżany (Polish); **Faczyński**, 197.

Studien der böhmischen Kreideformation; **Frič**, 227.

†Tertiärformation Böhmens; **Kafka**, 342.

†Pleistocäne Fauna (Ungarn); **Kormos**, 369.

Changements de climat en Hongrie; **Kormos**, 370.

†Ungarn, Pleistozänfauna des Somlyóberges bei Püspökföld; **Kormos**, 371.

Geophysik von Rovigno; **Krumbach**, 376.

Zur Kenntnis des Faistenauer Hintersees bei Salzburg; **Micoletzky**, 449.

Fauna der österreichischen Karstländer; **Müller**, 473.

Physiographie des Bezirkes Mielec; **Romer**, 553.

Balkan Peninsula.

dl

Insel Cerigo Forschungsreise; **Storch**, 618.

Die Biologie des Inundationsgebietes der unteren Donau und des Donaudeltas; **Antipa**, 13.

Mediterranean.

dm

Internationale Mittelmeerforschung; **Lohmann**, 412.

Veränderungen der nordadriatischen Fauna; **Steuer**, 611.

Marine Fauna des Triester Golfes; **Stiasny**, 612 & 613.

Baltic.

do

Fischparasiten und andere Evertbraten an der Küste von Oesel; **Schneider**, 571.

Planktonorganismen der Küste von Oesel; **Taube**, 628.

Asia and Malay Archipelago. e

The "Albatross" in the Philippines; **Barrows**, 28.

Die Zoographie des östlichen Teils des Indo-australischen Archipels; **Beaufort**, 41.

Java, zoologisch und biologisch; **Koningsberger**, 368.

†Paläozoische, mesozoische und känozoische Sedimente aus dem südwestlichen Neu-Guinea; **Martin**, 429.

†Fauna des Oberdevons von Muhodjary (Russ. + deutsch. Rés.); **Nifantov**, 482.

Fauna der Moosrasen der Aru- und Kei-Inseln; **Richters**, 547.

Zoogeography of the East Indian archipelago; **Van Kampen**, 659.

†Cambrian, China; **Walcott**, 669.

†Pliocene and diluvial fossils, Tokyo; **Yokoyama**, 690.

Africa and Madagascar. f

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1,20 M. 2,40 M.

†Guelma, Algeria; **Daresté de la Chavanne**, 154.

Côte occidentale d'Afrique; **Gruvel**, 265.

Expédition suédoise zoologique à l'Afrique orientale; **Lönnberg**, 411.

Nordafrikanische Zoocecidien; **Schneider-Orelli**, 576.

Origine de la faune de Madagascar; **Théry**, 631.

Nouvelles études sur le Plancton de la baie d'Alger; **Viguié**, 660.

Ostafrika; **Voeltzkow**, 661.

North America. *g*

Climatic conditions in North America since the maximum of the latest glaciation; **Alden**, 5.

†The Carbonic fauna of the Magdalen islands; **Beede**, 47.

†Permian of North America; **Case**, 102.

†The Sutton Jurassic of the Vancouver group; **Clapp & Shimer**, 121.

†Silurian formations of Tennessee, Indiana and Illinois; **Foerste**, 213.

†Cincinnatian and Lexington fossils; **Foerste**, 214, 215 & 216.

†Carboniferous fossils, Arkansas; **Girty**, 243.

†Pennsylvanian fossils from Oklahoma; **Girty**, 244.

†Fauna of the Moorefield shale of Arkansas; **Girty**, 245.

†Monroe formation of southern Michigan and adjoining regions; **Grabau & Sherzer**, 256.

Changes of climate, Wisconsin ice sheet; **Hay**, 289.

†Faunal succession in the Port Clarence limestone, Alaska; **Kindle**, 354.

Biological survey of the sand dune region, Michigan; **Ruthven**, 563.

†Yakutat bay region, Alaska; **Tarr & Butler**, 627.

Central & South America. *h*

Fauna chilensis aliarumque regionum neotropicarum. Abhandlungen zur Kenntnis der Zoologie Chiles und anderer neotropischer Gebiete nach den Sammlungen von Dr. L. Plate. Bd 4, H. 1. Zool. Jahrb. Jena Suppl. 13 Bd 4 1911 (1-136 mit 11 Taf.).

Lake Titicaca; **Coker**, 132.

Salvador; **Guzman**, 271.

Central South America; **Haseman**, 285.

Expedition, central South America, 1907-1910; **Holland**, 319.

†Die Umwandlungen des amerikanischen Kontinents während der Tertiärzeit; **Ihering**, 327.

Origin of neotropical fauna; **Ihering**, 328.

Des faunes terrestres des forêts du Brésil; **Ihering**, 329.

Brazil, zoological bibliography; **Ihering**, 330.

Chile, distribution; **Quijada**, 526.

Australia. *i*

Die Fauna Südwest-Australiens; **Michaelsen & Hartmeyer**, 448.

Arctic. *k*

Nordisches Plankton; **Brandt & Apstein**, 78.

Plankton des Kola-Fjords (Russ. + deutsch. Rés.); **Derjugin**, 165.

†Spitzbergen, Fauna der Moskauer Stufe; **Holtedahl**, 321.

Fauna Spitzbergensis; **Koenig**, 358.

Moosfauna, Spitzbergen; **Richters**, 546.

Atlantic. *l*

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Eier und Cysten des nordischen
Planktons; **Lohmann, 414.**

Campagnes de la Princesse Alice;
Monaco, 455, 456, 457, 458.

Campagne scientifique de l'Hiron-
delle II; **Richard, 544.**

Bahamas (En suédois); **Rosén, 556
& 557.**

Antarctic.

o

Das Südpolar-Land in seinen Be-
ziehungen zur Verbreitung der Pflanzen
und Tiere; **Alsberg, 9.**

Deutsche Südpolar Exp.; **Drygalski,
176.**

La faune et la flore de l'Antarctique;
Trouessart, 652.

TAXONOMY.

0231

The purpose and some principles of
systematic zoology; **Clark, 123.**

Classificazione zoologica; **Coggi, 130.**

Classificazione zoologica; **Emery,
190.**

Das neue zoologische System; **Hat-
schek, 287.**

Das zoologische System; **Grobben &
Heider, 263.**

Die Klassen und höheren Gruppen
des Tierreichs; **Poche, 509.**

Vereinheitlichung der Bezeichnung
und exakteren Verwendung der syste-
matischen Kategorien und zur ratio-
nellen Benennung der supergenerischen
Gruppen; **Poche, 512.**

The ontogeny of a genus; **Clark, 122.**

L'espèce en zoologie systématique;
Trouessart, 651.

Subspecies et Morpha; **Oberthür,
487.**

Tiere in der Naturalis Historia des
Plinius; **Steier, 604.**

PR

II. PROTOZOA

ARRANGED BY

H. M. WOODCOCK, D.Sc. (Lond.)

CONTENTS

	PAGE
I. TITLES	4
II. SUBJECT INDEX :—	
Comprehensive and General = 0403 :—	
Philosophy	28
Historical	28
Bibliography.. .. .	28
Treatises, Collected Works	29
Addresses, Reviews.. .. .	29
Economics	29
Utility	29
Protozoa and disease	29
Amoebosis	29
Coccidiosis	29
Piroplasmosis	29
Myxosporidiosis	29
Sarcosporidiosis	30
Haplosporidiosis	30
Trypanosomosis	30
Leishmaniosis	30
Various	30
Miscellaneous	30
Transmission	30
Experimental infection	31
Cultivation	31
Collection and technique.. .. .	31
Structure = 0407 :—	
General Anatomy, Morphology	32
(a) of Sarcodina	32
(b) of Sporozoa	32
(c) of Mastigophora	32
(d) of Ciliophora	33
(N-9186 e)	a 4

	PAGE
Minute Structure ; Special Anatomy :—	
(a) Test, shell, etc.	34
(b) Cytoplasm and nucleus	34
(c) Organelles of movement, etc.	35
Physiology = 0411 :—	
General	35
Nutrition, secretion	35
Senescence, degeneration	36
Movement, contractility	36
Sex and conjugation	36
Environmental effects ; response to stimuli	36
Effects of chemical reagents	36
Development and reproduction = 0415 :—	
(a) Mycetozoa (vacant).	
(b) Sarcodina	37
(c) Sporozoa	37
(d) Mastigophora	39
(e) Ciliophora	40
Ethology = 0419 :—	
Behaviour, habits	41
Plankton	41
Commensalism	42
Parasitism	42
Plantae	42
Protozoa	42
Platyhelminthia	42
Chaetopoda	42
Crustacea	42
Myriapoda	43
Insecta	43
Polyzoa	44
Mollusca	44
Pisces	44
Amphibia	44
Reptilia	45
Aves	45
Mammalia	45
Variation, Phylogeny = 0423.. .. .	46
Distribution, Geography = 0427 :—	
Geographical.. .. .	47
Europe	47
Asia	47
Africa	47
America	47
Oceanic	47

Geological :—							PAGE
General ..	..	..	..	..	..	..	48
Quaternary ..	..	..	..	..	..	..	48
Tertiary ..	..	..	..	..	..	..	48
Secondary ..	..	..	..	..	..	..	48
Primary ..	..	..	..	..	..	..	48

III. SYSTEMATIC = 0431 :—

Protozoa, General ..	..	..	..	..	..	..	48
1. Mycetozoa ..	..	..	..	..	..	..	49
2. Sarcodina ..	..	..	..	..	..	..	49
(a) Amoebae ..	..	..	..	..	..	..	49
(b) Foraminifera ..	..	..	..	..	..	..	50
(c) Heliozoa ..	..	..	..	..	..	..	54
(d) Radiolaria ..	..	..	..	..	..	..	54
3. Sporozoa ..	..	..	..	..	..	..	54
(a) Gregarinidea ..	..	..	..	..	..	..	54
(b) Coccidiidea ..	..	..	..	..	..	..	55
(c) Haemosporidia ..	..	..	..	..	..	..	55
(d) Myxosporidia ..	..	..	..	..	..	..	57
(e) Sarcosporidia ..	..	..	..	..	..	..	58
(f) Haplosporidia ..	..	..	..	..	..	..	58
Incertae sedis ..	..	..	..	..	..	..	58
4. Mastigophora ..	..	..	..	..	..	..	59
(a) Flagellata ..	..	..	..	..	..	..	59
(b) Silicoflagellata (vacant)							
(c) Dinoflagellata	64
(d) Rhynchoflagellata (vacant)							
5. Ciliophora	66
(a) Ciliata	66
(b) Suctoria	67

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II.—SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 0403

Philosophy.

The principles of Protistology; Dobell, 138.

Historical.

Über die wahre Natur der von Will und Busch in Siphonophoren beobachteten „Eingeweidewürmer“ (*Trypanophis grobbeni*); Poche, 370.

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Protozoan literature for 1910, with abstracts of the more important papers; Gross, 202.—Record of Protozoan literature for 1910; Woodcock, 505.

Abstracts of papers dealing with trypanosomosis and piropasmosis of animals for the year 1910; Knuth, 247.

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Lehrbuch der Protozoenkunde. Eine Darstellung der Naturgeschichte der Protozoen mit besonderer Berücksichtigung der parasitischen und pathogenen Formen (3 stark verm. Aufl.); **Doflein, 139.**

Handbuch der pathogenen Protozoen; v. **Prowazek** (u. Mitwirkung von Anderen), 379a. (Vg. auch **Hartmann, 215 & 216; Neresheimer, 343 & 344; Rodenwaldt, 388; Werner, 495.**)

Collected works of (the late) **F. Schaudinn, 406.**

Addresses, Reviews, &c.

The scope of protozoology [Lecture delivered at the Marine Biological Laboratory, June 30, 1911]; **Calkins, 69.**

On Foraminifera; **Wright, 516.**

Recent advances in our knowledge of sleeping-sickness and *T. gambiense*; **Bagshawe, 29.**—General review of the Trypanosomes and trypanosomoses of Rhodesia; **Bevan, 43.**

Review of recent additions to our knowledge of the morphology and cytology of Trypanosomes and other parasitic Protozoa (*Amoebae*); **Pittaluga, 368.**

A critical review of Kala-Azar and Tropical Sore and their parasites; **Leishman, 283.**

Review of recent knowledge relating to the Haemosporidia of warm-blooded Vertebrates (excepting Haemogregarines); **Bertrand, 41.**

Unsere heutigen Kenntnisse über Piroplasmen und die von ihnen hervorgernfenen Erkrankungen; **Lebedeff, 277.**

Economics.

UTILITY.

Studien über edaphische Organismen (u. a. Rhizopoda); **Francé, 181.**

PROTOZOA IN RELATION TO DISEASE.

(a) *Amoebosis.*

Les parasites intestinaux de la Martinique; **Noc, 346.**

Entamoeba tetragena, as the agent of amoebic dysentery in Manila and Saigon; **Whitmore, 498.**

(b) *Coccidiosis.*

Coccidiosis of the intestine of the goat; **Stevenson, 447.**

Pneumo-enteritis in the red grouse perhaps partially due to the presence of Coccidian cysts in the bronchioles, etc.; **Fantham & Hammond-Smith, 157.**

(c) *Piroplasmosis and Anaplasmosis.*

Piroplasmosen (Sammelreferat); **Michl, 324.**

Theileria parva und *Babesia mutans*, Küstenfieberparasit und Pseudoküstenfieberparasit (vergleichende Studie); **Gonder, 193.**

East Coast fever in elands (German E. Africa), diagnosed by the occurrence of Koch's "blue bodies" even in absence of *Theileria parva*; **Lichtenheld, 287.**

Piroplasmose der Zebu-Hybriden in Tunis (Russ.); **Yakimoff & Kohl-Yakimova, 519.**

Piroplasma bigeminum of cattle in the southern part of Formosa (Japanese); **Koizumi, 254.**

Presence of the bodies known as "*Anaplasma marginale*" has no pathological significance: they occur naturally in many animals; **Gilruth, Sweet & Dodd, 190.**

(d) *Myxosporidiosis.*

Notes on the infection of fish (Lake of Lucerne) with Myxosporidia; **Nufer, 348.**

A bee-disease due to *Nosema apis*; **Fantham & Porter, 158.**

Effects of *Glugea polymorpha* n. sp. on the larvae of *Simulium*; **Strickland, 457.**

Beiträge zur Kenntnis von *Glugea lophii*. Ueber die Beziehungen zwischen Parasit und Wirtsgewebe (Nervensystem); **Weissenberg, 486 & 487.**—Relation of the cysts of *Glugea anomala* and *hertwigii* to the hosts' cells and tissues; true cyst-formation; **Weissenberg, 488.**

(e) *Sarcosporidiosis*.

Toxic substances present in the Sarcosporidian cysts of the horse; **Sabrazès & Muratet, 398.**

Sarcocystis tenella of the sheep produces a true toxin; **Teichmann & Braun, 472.**

(f) *Haplosporidiosis*.

Haplosporidium potamillae associated with yeasts, as a cause of disease in *Potamilla torelli*; **Mesnil, F. & Caullery, 319.**

(g) *Trypanosomosis*.

On the ability to obtain a strain of *Trypanosoma lewisi* virulent not only to rats but to other Rodents (incl. mice, rabbits, guinea-pigs); **Roudsky, 395.**

A trypanotoxin produced by *T. brucei*; **Laveran & Pettit, 275.**

Relation of the different phases of *Trypanosoma* (*Schizotrypanum*) *cruzi* to the human organs; **Chagas, 90**; also **Vianna, 479.**

Eine klinisch und ätiologisch der Trypanosomiasis und Schlafkrankheit verwandte Krankheit bei Javanen auf Sumatra; **Elders, 145.**—Doubts cast upon the occurrence of human trypanosomosis and leishmaniosis, etc., in Sumatra **Schüffner, 419.**

Murrina of Equines, and *T. hippicum*; **Darling, 122.**

Trypanosomen bei gesunden Rindern; **Vrijburg, 482**; also **Wester, 496.**—*Trypanosoma theileri* in Rindern des Don-Gebietes (Russ.); **Stolnikoff, 454.**

(h) *Leishmaniosis, etc.*

Die Aetiologie der in Surinam vorkommenden sogenannten „Bosch-yaws“, einer der Aleppobeule analogen Erkrankung; **Flu, 172.**

Presence of the *Leishmania*-parasites in the cerebro-spinal fluid of a child suffering from Kala-Azar; **La Cava, 261.**

Oriental Sore in Bagdad and *Leishmania tropica*; **Wenyon, 493.**

(j) *Various and uncertain.*

The disease called “blackhead” in turkeys perhaps due, at any rate in part, to the coecal Flagellates (*Trichomonads*, etc.) occurring; **Hadley & Amison, 208.**

Un Flagellé (cf. *Monas pyophila* Grimm), associé avec une éruption vulvo-vaginale pustulo-ulcéreuse, chez une bufflesse; **Pœnaru, 371.**

Small corpuscles, both intra- and extraglobular, in the blood and organs of yellow-fever patients, regarded as Protozoan parasites, perhaps the causative agent; **Seidelin, 423.**—This minute Protozoan blood parasite termed *Paraplasma flavigenum* n. g. n. sp.; **Seidelin, 424.**

Negri bodies (“*Neuroryctes hydrophobiae*”) regarded as not really parasites at all, but of the nature of nucleolar extrusions; **Acton & Harvey, 1.**

The cancer-cell regarded as an independent unicellular organism (“*Unicellula cancri*”), allied to the Protozoa; **Butlin, 65.**

Miscellaneous.

Transmission; natural infection.

On the exact mode of transmission of *T. lewisi* to the rat by the rat-flea (*Ceratophyllus fasciatus*); **Minchin & Thomson, 328**; also **Strickland, 456.**

Transmission of the Trypanosomes of the leech, goldfish, bream and perch, and also of the Trypanoplasm of the goldfish, by *Hemiclepsis marginata*; **Robertson, 387.**

Infectivity of certain forms of *Trypanosoma gambiense* in the alimentary canal of *Gl. palpalis* after a period of at least 24 days since the fly fed; **Bruce, Hamerton, Bateman & Mackie, 60.**

Transmission of *T. gambiense* by *Gl. morsitans*; **Taute, 468.**—of *T. brucei* by *Gl. palpalis*; **Fischer, 169.**

No hereditary infection of *Gl. palpalis* with *T. gambiense*; **Kleine & Taute, 246.**

Passage of *Trypanosoma gambiense* through mucous membranes and (uninjured) skin, producing infection; **Hindle, 226.**

Fowls in Uganda cannot act as a "reservoir" of *T. gambiense*; **Bruce, Hamerton & Bateman, 55.**

Tabanus spp. do not transmit *T. dimorphon (pecorum)* mechanically: uncertain, however, if they act as natural transmitters; **Bruce, Hamerton & Bateman, 56.**

The parasites of Oriental Sore (*Leishmania tropica*) perhaps transmitted by some mosquito or the sand-fly (*Phlebotomus*); **Wenyon, 493.**

On the possibility of mosquitoes (*Anopheles*) transmitting the *Leishmania* parasites [*L. infantum*]; **Franchini, 182.**—Remarks á propos of this subject; **Wenyon, 494.**

Leishmania: trasmissione naturale da cane-a cane per *Pulex serraticeps*; **Sangiorgi, 401.**

Du rôle probable de la mouche domestique dans la transmission des *Leishmania*; **Cardamatis & Melissidis, 75.**

Transmission du *Leptomonas davidi* des Euphorbes par un Hémiptère, *Nysius euphorbiae*; **Lafont, 262.** [Cf. also **Bouet & Roubaud, 48.**]

Transmission of Amakebe (or East Coast fever) of calves by the brown tick, *Rhipicephalus appendiculatus*; **Theiler, 473.**

On the possibility of the infection of Man with the Myxosporidia of edible fish; **Nemeczek, 342.**

Infection of mice with the oocysts of *Klossiella muris*; **Sangiorgi, 399.**

Experimental infection.

Artificial infection of mice with *T. lewisi*, both from blood and from cultures (ordinary not "enforced" strain); **Delanoe, 130.**

On the mechanical transmission of Trypanosomes (Nagana and Mal de Caderas) by means of the bed-bug (*Cimex lectularius*); **Sangiorgi, 400.**

Mechanical transmission of Trypanosomes (of Nagana, sleeping-sickness, etc.) by *Stomoxys calcitrans*; **Schuberg & Kuhn, 417.**

Infection of dogs with *Leishmania* by inoculation of intestinal contents of infected fleas (*Pulex serraticeps*);

Basile, 32.—Experimentelle Infektion mit „*Leishmania infantum*“ in der Hornhaut des Kaninchens; **Volpino, 480.**

Experimental production of sarco-sporidiosis (from the opossum) in the guinea-pig, by intra-muscular injections of sporozoites; **Darling, 123.**

Cultivation.

Aerial contamination as a source of fallacy in the culture of *Amoebae* from faeces, etc.; **Wells, 491.**

Züchtung der Amoeben; **Grüsz, 204.**

Die Technik der Amöbenzüchtung; zusammenfassende Uebersicht; **Wülker, 517.**

Cultivation of malarial parasites *in vitro* (citrated blood) for 3 weeks by preventing development of complement; **Bass, 37.**

Kulturen von *Piroplasma*, *Trypanosoma*, *Leishmania* (Russ.); **Marci-novski, 299.**

Culture du Trypanosome du type *theileri* des bœufs tunisiens; **Manceaux, Yakimoff & Yakimoff, 295.**

Cultures de *Leishmania tropica* et de *L. infantum* sur milieu Novy, MacNeal, Nicolle au sang chauffé; **Mathis, 305.**—Culture de *L. tropica* sur milieu solide (de tubes de sang gelosé, N.N.N.); **Nicolle & Manceaux, 345.**

Cultivation of the *Leishmania* of dogs in N.N.N. medium: resemblance to the cultural forms of *L.* of Kala-Azar; **Basile & Visentini, 36.**

A "constant" culture-medium of beef-extract is as favourable for the reproduction of *Paramœcium* as a "varied" hay-infusion medium; **Woodruff & Baitsell, 511.**

Technique.

Fixierung und Färbung der Protozoen; **Giemsa, 189.**

Zur Technik des Amöbenstudiums; **Puschkarew, 381.**

Zur Technik der Foraminiferen-Präparation; **Debes, 127.**

Methods for detecting sporozoites and zygotes of the malarial parasites in mosquitoes; **Stephens, 446.**

Technique for observations on the germination of the spores in *Chloromyxum leydigii*; **Erdmann, 151.**

On an iron-haematein stain and a slight modification of Giemsa's stain, useful for Trypanosomes in sections; **Seidelin, 422.**

Sur la technique des cultures des *Leishmania*; **Manceaux, 294.**

Technique for determining presence of Ciliates in soil-cultures; **Goodey, 198.**

STRUCTURE. 0407

Morphology and General Anatomy.

(a) of SARCODINA.

Re-description of several of Haeckel's "Monera" (e.g. *Protophytes*, *Gymnophrys*, *Protophyxa* and *Myxastrum*), with a view to ascertaining their nearest relationships; **Schepotieff, 411.**

Notes on Rhizopods, including new forms; **Penard, 362.**

Ueber eigenartige Körperformen von *Amoeba proteus*; **Gruber, 203.**

Comparative notes on the morphology of *Amoebae* of the *limax*-group, including 2 n. spp., *A. densa* and *circumgranosa*; **Alexeieff, 4.**

Morphology of *Amoebae* developing on culture-media exposed to air; **Wells, 491.**

Morphological characters, as seen in cultures, of various *Amoebae* from dysenteric sources and free-living, compared; **Liston & Martin, 290.**—"Cultural" *Amoebae* from Manila, including a new form of *Mastigamoeba* (*Trimastigamoeba philippinensis*); **Whitmore, 499.**

Morphological notes on *Entamoeba coli* and *tetragena*, compared with cultural (free-living) *Amoebae*; **Whitmore, 498 & 499.**

Chlamydomyxa schaudinni n. sp.; **Schüssler, 420.**

Comparative account of the morphology of Foraminifera; **Rhumbler, 384.**

Description of *Marginulina fissicostata* (Gümb.); **Silvestri, 436.**

Morphologie der Gastraeaden (*Haliophysea tumanowiczii* und *Gastrophysema*); **Schepotieff, 409.**

General morphology of the Xeno-phyophora (*Psammietta*, *Stannophyl-lum*); **Schepotieff, 410.**

Note on the marine Heliozoan, *Gymnosphaera albida*; **Caulley, 85.**

Challengeridae der Plankton-Expedition; **Borgert, 47.**

Beitrag zur Kenntnis der Orosphaeriden; **Riecke, 385.**

(b) of SPOROZOA.

Description of new Gregarines; **Cognetti de Martiis, 109.**—Morphological notes on Gregarines; **Wellmer, 490.**

Structure of a new form of the metameric Gregarine *Taeniocystis* (*T. legeri*); **Cognetti de Martiis, 110.**

Account of *Achromaticus vesperuginis*; **Yakimoff, Stolnikoff & Kohl-Yakimova, 522.**

Change in form of the adult macrogametocytes of the pernicious malarial parasite in the blood; **de Raadt, 382** (pl. iv).

Observations on *Halteridium noctuae* and *Leucocytozoon ziemanni*; **Minchin & Woodcock, 330.**—New *Leucocytozoa*; **Mathis & Léger, 306.**

New Haemogregarines (leucocytic) from birds; **Aragao, 20.**—New Haemogregarines of Reptiles; **França, 175 & 176;** also **Mathis & Léger, 312.**

A new Haemosporidian parasite: *Toddia bufonis* n. g., n. sp.; **França, 175.**—A new parasite (*Microsoma mustelae*) regarded as allied to the *Piroplasmata*; **Lebedeff & Tscharnotzky, 278.**

Account of *Anaplasma marginale*: comparison with Chlamydozoa; **Sieber, 430.**

Morphological characters in favour of the vegetable nature of the parasites (*Ichthyosporidium*), causing "Taumelkrankheit" of trout and other fish; **Pettit, 367.**

(c) of MASTIGOPHORA.

Account of a new parasitic Euglenoid, *Astasia captiva*; **de Beauchamp, 38.**

Notes on Flagellates commonly developing in infusions (*Bodo* spp., *Cercomonas* spp. and *Chilomonas*); Alexeieff, 12.

Morphological notes on Chrysomonads, including new forms; Scherif, 412.

Account of a new tentacle-bearing Chrysomonad (*Cyrtophora pedicellata* n. g., n. sp.); Pascher, 356.—A new Chlamydomonad (*Scherffelia* n. g.); Pascher, 360.

A new uniflagellate from caddis-fly larvae, *Embadomonas agilis* n. g., n. sp.; Mackinnon, 293.

Different phases of *Herpetomonas lygaei*; Archibald, 21.

Different forms of *Leptomonas muscae-domesticae*; Dunkerly, 142.—*L.* and (or) *Herpetomonas muscae-domesticae*, different forms described; Flu, 171.—Forms of *Leptomonas davidi* Lafont; França, 179.

Different forms of Flagellates of house-flies; "*Herpetomonas*—" and trypanosome-forms probably both belonging to a *Leptomonas*; Wenyon, 493.

Distinct trypanosome-forms from *Drosophila*, viz., eutrypanosomes (*T. drosophilae*) and leptotrypanosomes, the latter connected with *Leptomonas d.*; Chatton & Léger, 103.—*Leptomonas* spp. from various spp. of *Drosophila*, different forms compared; id. 102.

Morphology of *Monocercomonas cetoniae*, n. sp.; Jollos, 241.

Struktur von *Oxyrrhis*, *Nephroselmis* und einigen Euflagellaten; Senn, 426.

Notes on *Prowazekia weinbergi*; Mathis & Léger, 311.

Notes on certain intestinal Flagellates of Amphibia, *Octomitus intestinalis*, *Polymastix batrachorum* n. sp., *Monocercomonas bufonis*, *Heteromita* (*Bodo*) *lacertae* and *Rhizomastix gracilis* n. g., n. sp.; Alexeieff, 12.

Morphology of different Flagellates (mostly Trichomonads) from the caeca of fowls; Martin & Robertson, 303.

On the morphology of the Trichonymphids and allied forms; Grassi & Foà, 201.

(N 9186 e)

Morphology of *Trypanosoma gambiense*; comparison of different forms with those of *T. brucei*; Bruce, 53.

Zur Kenntnis des Dimorphismus von *Trypanosoma rhodesiense*; Swellengrebel, 461.

Morphology of *Trypanosoma evansi*; comparison with *T. brucei*; Bruce, 52.

Morphology of *T. dimorphon* (sensu Lav. & Mesn.), or *T. pecorum* described; Jowett, 242.—Comparative morphological notes on *T. uniforme* n. sp. and *T. nanum*; Bruce, Hamerton, Bateman & Mackie, 57.—Morphological comparison between two Trypanosomes from Gambian horses (probably *T. dimorphon* and *T. vivax*); Yorke & Blacklock, 523.

Comparative morphology of animal Trypanosomes from the Soudan (*T. brucei* or *pecaudi*, *evansi*, *vivax* or *cazalboui* and *nanum* or *pecorum*); Fry, 185.

Morphology of a Trypanosome with short flagellum, allied to *T. congolense*, termed *T. frobenius* n. sp.; Weissenborn, 489.

Morphologie du Trypanosome du type *theileri* des bœufs tunisiens; Manceaux, Yakimoff & Yakimoff, 295.

Morphology of *Trypanosoma grayi* in the crocodile; Kleine & Taute, 246.

Different forms (regarded as sexual and asexual) of *Trypanosoma rotatorium*; Machado, 292.—Different forms of Trypanosomes of frogs (Japan); all regarded as *T. rotatorium*; Koidzumi, 252.

Morphological notes on different forms of Trypanosomes from frogs and toads; Mathis & Léger, 307 & 310.

Different forms of a new piscine Trypanosome (*T. chagasi*); Horta & Machado, 228.

Form-changes and varieties in *Ceratomyxa hirundinella*; Krause, 257.

Account of *Gymnodinium biciliatum*, a new fresh-water species; Ohno, 350.

(d) of CILIOPHORA.

Structure of two new marine Ciliates (*Blepharisma clarissima* n. sp. and *Coelosoma marina* n. g., n. sp.); Anigstein, 17.

Account of two new parasitic Infusoria: *Perikaryon cesticola* and *Conocophrys davidoffi*; Chatton, 95.

Account of a new marine Acinetarian, *Tokophrya steueri* n. sp.; Schröder, 416.

Minute structure: special anatomy.

(a) Test, shell, etc.

Composition of the test in the arenaceous Foraminifera; Fauré-Fremiet, 168.

Shell-structure and modifications in the Foraminifera; Rhumbler, 384.

Schalenbau der Fusulinen; Schellwien u. a., 408.

Minute structure of the sedentary Foraminiferan *Polytrema* and allied generic forms; Hickson, 225.

Fremdkörperskelete bei tripyleen Radiolarien (spec. *Caementellidae*); Borgert, 46.

Modifications de la cuirasse chez quelques Périдиниens; Mangin, 298.—Sur l'existence d'individus dextres et senestres chez certains Périдиниens; arrangement diverse des plaques; Mangin, 296.

Comparative account of skeletal structure of *Ceratium* spp.; Jørgensen, 239.

Comparative account of skeletal structure of *Gonyaulax* spp.; Kofoed, 248.—Skeletal morphology of *Gonyaulax catenata* (Lev.); Kofoed, 250.

(b) Cytoplasm and Nucleus.

Die Konstitution der Protozoenkerne und ihre Bedeutung für die Zellenlehre; Hartmann, 213 (13 figs.).

Mitochondria of Rhizopoda Testacea, constitution and behaviour; Fauré-Fremiet, 160.

Nuclear details of *Amoeba hydraxena* n. sp.; Entz, 149.—Nuclear division and behaviour of kinetic centre in *Amoeba hartmanni* n. sp.; Nägler, 336.

Entstehung der Hüllmembran der Glanzkörper bei *Pelomyxa*; Stolz, 452.

Mitochondria in *Haplophragmium*; Fauré-Fremiet, 160.

Foreign spicules appropriated and made use of by the Heliozoan *Gymnosphaera albidia*; Caullery, 85.

Entstehung der Kristalloide der Sphaerozoen (*Collozoum inerme*, u. a. f.) in den Kernen; Stiasny, 449.

Details of nuclear behaviour in different phases of the multiplication of *Thalassicolla*; Huth, 230.

Cytological features of new Monocystids; Cognetti de Martiis, 109.

Cytological details in *Monocystis rostrata*; the formation of the first division-spindle; Mulsow, 334.

Nuclear and cytological details of the Gregarine, *Geneiorhynchus monnieri*; Galtzoff, 188.—Of *Pterocephalus indicus* n. sp.; Merton, 317.

Cytological points regarding *Adelea ovata* and *Coccidium lacazei*; the question of the karyosome and associated centrosome; Debaisieux, 126.

Cytological details of the different phases of *Klossia vitrina*; Moroff, 333.

Haemogregarina tupinambis Lav. & Salim. regarded as shewing binucleate structure; Carini, 78.

Sur une Hémogrégarine de grenouille à capsule singulière; Schein, 407.

Bau der Cysten von *Nosema (Glugea) lophii*; Weissenberg, 486 & 487.—Bau der Cysten (echte Cysten) von *Glugea anomala* und *G. hertwigii* n. sp.; Weissenberg, 488.

The membrane or envelope surrounding the Sarcosporidian cyst considered to be a reaction of the host's tissue; Alexeieff, 7.

Minute structural features of the spores of *Sarcocystis rileyi*; Crawley, 115.

Cytological changes in *Lymphocystis johnstonei* during growth; Awerinzew, 24.

Minute structure and composition of the characteristic "*Molluscum contagiosum*" bodies; Mariani, 300.

Nuclear structure of *Bodo asiaticus* (Cast. & Chalm.) of the *Prowazekia*-type; Whitmore, 497.

Ueber die Berechtigung der Flagellatenordnung „Binucleata“ und der Gattung „*Prowazekia*“. Eine Erwiderung an A. Alexeieff; **Hartmann, 212.**

Studien über *Euglena ehrenbergii*, insbesondere über die Körperhülle; **Hamburger, 209.**

Nuclear division of the type known as “haplomitosis” among *Euglenidae* (esp. *Scytomonas pusilla*) and other Protozoa; **Alexeieff, 11.**

“Axoplast” of *Leptomonas droso-phila*, the equivalent of the “Doppel-faden” of *Herpetomonas m.-d.* and of the axostyle of Trichomonads; **Chatton & Léger, 104.**

Cytological details in *Herpetomonas* and *Rhynchoidomonas* spp.; **Alexeieff, 6;** also **8.**

Nuclear division in *Monas vulgaris*; blepharoplast (basal granule) as centrosome; **Alexeieff, 4.**

Cytological details of the parabasal apparatus and associated organellae in certain Trichonymphids, including new forms; **Janicki, 235.**

Kerntheilungsvorgang bei *Ceratium tripos* var. *subsalsa*; **Apstein, 18.**

The macro- and micronucleus of Infusoria; **Stauffacher, 444.**

Nuclear details, with special reference to the cyclical variations of the karyosome in two parasitic Ciliates (*Balantidium* spp.); **Chagas, 89.**

Nature and experimental production of trichites in *Didinium nasutum*; **Fauré-Fremiet, 162.**

La structure intime (cytoplasme et noyau) de *Fabrea salina*; **Fauré-Fremiet, 161.**

Sur le pigment de l'Infusoire, *Fabrea salina* (“fabrein”); **Fauré-Fremiet, 163a.**

Nuclear structure (recalling that of *Foettingeria*) of a new Ciliate, *Perikaryon cesticola*; **Chatton, 95.**

(c) *Organellae of locomotion and attachment, etc.*

Pseudopodien, aber keine Geissel, bei den Chrysomonad, *Chrysopyxis*; **Lauterborn, 264.**

(N-9186 e)

Processes of attachment of the Gregarine *Ptercephalus indicus* n. sp.; **Merton, 317.**

Flagellar constitution of *Monas vulgaris*, homology of blepharoplast (basal granule) and centrosome; **Alexeieff, 14.**

Bau der Geissel bei *Trypanosoma* n. sp. (Russ.); **Yakimoff, 518.**

Anatomie und Histologie des Stiels von Vorticelliden (*Zoothamnium alternans*); **Koltzoff, 256.**

PHYSIOLOGY.

0411

General, various.

Über die willkürliche Hervorrufung von Rezidiven bei Protozoenkrankheiten durch künstliche Parthenogenese; **Hartmann, 214.**

Factors and conditions influencing the multiplication, and occurrence of “cycles” or periods in the Trypanosomes of sleeping-sickness; **Ross & Thomson, 390.**

Physiological differences in diverse races of *Paramæcium*; **Jennings & Hargitt, 238.**

Croissance hypertrophique et régression morphologique chez les Acinétiens (*Tokophrya* and *Paracineta*); **Collin, 110.**

Nutrition, digestion, secretion, etc.

Beitrag zur Biochemie der Protozoen; **Panzer, 354.**

Hydren vertilgende Amöben (*A. hydraxena* n. sp.) (Ungarisch); **Entz, 149.**

Le rôle des mitochondries dans l'élimination du fer chez les Rhizopodes arénacés; **Fauré-Fremiet, 160.**

Ueber die intracelluläre Agglutination und verwandte Erscheinungen bei *Pelomyxa* und anderen amöbenartigen Organismen; **Štolc, 452.**

Veränderungen der Kernplasma-relation während des Wachstums von *Lankesteria ascidia*; **Siedlecki, 431.**

Über ein Protozoentoxin; **Teichmann, 470.**

Formation of a toxin by *Sarcocystis tenella*, and its properties; **Teichmann & Brauer, 472.**

Intracelluläre Verdauung der Infusorien (Russ.); **Metalinikoff**, 322.

Der Gaswechsel von *Colpidium col-poda*; **Wachendorff**, 482a.

Senescence, degeneration.

Notes on physiological degeneration in *Crithidia calliphorae* and *Herpetomonas* c. . **Swellengrebel**, 459.

On senile degeneration (depression-periods) in Infusoria; **Enriques**, 147.

Movement, contractility.

Ein Versuch, amöboide Bewegung als Folgeerscheinung des wechselnden elektrischen Polarisationszustandes der Plasmahaut zu erklären; **McClendon**, 315.

Peculiar modes of pseudopodial progression in *Amæba proteus*; **Gruber**, 203.

Fortbewegungsweise der Gregarinen; **Sokoloff**, 439.

Ueber die Bewegung der Tropica-macrogameten; **de Raadt**, 382.

Ultramikroskopische Studien über Geißelbewegung bei verschiedenen Flagellaten; **Uehla**, 476.

Sinuuous, undulatory and even amoeboid movements in intestinal Flagellates (*Bodo*, *Trichomastix*); **Gineste**, 191.

Action de diverses radiations lumineuses sur le mouvement des zoospores de *Chlamydomonas*; **Desroche**, 134.

Contraction des Stiels von Vorticelliden (*Zoothamnium*); **Koltzoff**, 255 & 256.

Sex and Conjugation.

Das Problem der Befruchtung und die Protozoenforschung; **Teichmann**, 471.

Sexuality and the problem of isogamy in the Infusoria; **Enriques**, 148.

Unlimited reproduction in *Paramoecium*, under suitable conditions, without conjugation?; **Woodruff**, 506.

Environmental effects; response to stimuli; adaptation.

Einfluss der Temperatur auf die Bewegung der Gregarinen; **Sokoloff**, 439.

Mode d'action des lumières colorées sur les zoospores de *Chlamydomonas*; **Desroche**, 134 & 136.

Effect of gravity upon the movements and aggregation of *Euglena viridis* and other spp., *Chlamydomonas* and *Glenodinium*; **Wager**, 483.

Galvanotropic orientation in *Gonium pectorale*; **Moore & Goodspeed**, 331.

Variations of *Ceratium hirundinella*, according to season, place, temperature; **Guyer**, 205.

Formveränderung von *Ceratium hirundinella* O. F. Müll. als Anpassungserscheinung an die Schwebefähigkeit; **Krause**, 257.

Verhalten von Infusorien und anderen niederen Organismen gegen stark verdünnte wässrige Auflösungen von **Basen**; **Bokorny**, 45.

The geotropism of *Paramoecium*; **Harper**, 211.

Evidence on the adaptation of *Paramoecia* to different environments; **Woodruff**, 507.

The effect of the culture-medium contaminated with the excretion-products of *Paramoecium* upon its rate of reproduction; **Woodruff**, 509 & 510.

The temperature-coefficient of the rate of reproduction in *Paramoecium aurelia*; **Woodruff & Baitsell**, 513.

Effects produced by cutting *Paramoecia* into two; **Calkins**, 68.—Effects of artificially dividing *Paramoecia* upon the subsequent behaviour and nuclear condition of the half lacking a micro-nucleus (during the asexual period); **Lewin**, 286.

Einwirkung verschiedener Ursachen auf die Contraction des Stieles von *Zoothamnium alternans*; **Koltzoff**, 255 & 256.

Effects of chemical reagents, etc.

Biological considerations upon the resistance of Trypanosomes to toxins; creation of refractive strains probably due to selection; **Levaditi & Twort**, 284.

Alteration of the chemico-physiological properties of *T. lewisi* (*vis-à-vis* the rat) during the development in an

Insectan host (*Haematopinus*); **Gonder**, 197.

Effects of different reagents on Trypanosomes in the blood of fish; **Robertson**, 387.

Influence of glucose, either in the liver of the rat or *in vitro* in maintaining the vitality of *T. lewisi*; **Biot & Richard**, 44.

Revivifying effect of serum and liver-extract upon Trypanosomes (*T. equiperdum*); **Schern**, 413.

Sensibility of *Trypanosoma rhodesiense* to human serum and that of monkeys **Mesnil & Ringenbach**, 321.

Action du sulfate de magnésie en solution concentrée sur quelques protoplasmas (*Strombidium sulcatum* and *Condyllostoma patens*); **Fauré-Fremiet**, 163.

Permeability of *Paramoecium* to different alkalies: mode of penetration and effects of same on cell; **Woodruff**, 507.

Mycetozoenstudien. Der Sexualakt; **Jahn**, 233.

REPRODUCTION AND LIFE-CYCLE. 0415

(a) MYCETOZOA.

(Vacant).

(b) SARCODINA.

Different phases in the life-cycle of *Protophyes*, *Gymnophrys*, *Myxastrum* and *Protomyxa*; **Schepotieff**, 411.

La division nucléaire et l'enkystement chez quelques Amibes du groupe *limax* (*Amœba punctata*, *limax*, *densa* and *circumgranosa*); **Alexeieff**, 4.

Division-stages of an Amoeba from liver-abscesses; **Liston & Martin**, 296; also **Martin**, 302.—Endogenous budding in the same form; cyst-formation; **Liston & Martin**, 290.

Amoeba hydraxena n. sp., Teilung (Ungarisch); **Entz**, 149.

Life-cycle of *Amoeba minuta* n. sp., including cyst-formation, conjugation of amoebulae; nuclear division of *Chlamydomorphys* sp.; **Popoff**, 374.

Phases of life-cycle of *Entamoeba coli*, as seen in cultures; **Fantham**, 154.—Phases in life-cycle of *Entamoeba williamsi* n. sp.; **Prowazek**, 378.

Cyst-formation in *Pelomyxa*; **Stole**, 453.

Life-cycle of the Foraminifera; **Rhumbler**, 384.

Gamogonie und Agamogonie der Gastraeaden (*Haliphysema* und *Gastrophysema*); **Schepotieff**, 411.

Ueber die Fortpflanzung von *Thalassicolla* nebst Bemerkungen zu der Arbeit von Moroff: „Vegetative und reproduktive Erscheinungen von *Thalassicolla*“; **Huth**, 230.

(c) SPOROZOA.

On an intracellular stage of the meal-worm Gregarine, *G. polymorpha*; **Ishii**, 231.

Nuclear changes, mitotic divisions, chromidial formation, in the developing cysts of *Geneiorhynchus monnieri*; **Galtzoff**, 188.

Life-history of *Lankesteria culicis*; **Wenyon**, 493.

Gametogony and conjugation in *Monocystis pareudrili*; **Cognetti de Martiis**, 109.—Phases of life-cycle and isogamons conjugation in *Monocystis rostrata* n. sp.; **Mulsow**, 334.

Schizogonic formation of gymno-spores, in cysts formed after association (by syzygies) in *Porospora fortunidarum*; **Léger & Duboscq**, 281.—Notes on encystment and spore-formation in *Cephaloidophora maculata* n. sp. id., 281.

Life-cycle of a new Coccidian, *Adelina octospora*; **Hesse**, 224.

Life-cycle of *Caryospora simplex* n. sp.; **Léger**, 280.

Life-cycle of *Coccidium avium*; full account of the principal phases; **Hadley**, 207.

Life-cycle of *Klossia helicina* A. Schn.; **Debaisieux**, 125.—Phases of life-cycle of *Adelea ovata* A. Schn. and *Coccidium lacazei* Schaud. distinguished; id., 126.

Life-cycle of *Klossia vitrina* n. sp.; **Moroff**, 333.

Schizogony of *Klossiella muris* distinguished from the true sporogony: occurrence of oocysts in urine; glomerular phase regarded as representing the later phases of sporogony which take place in the newly infected mouse; **Sangiorgi, 399.**

Phases in life-history of a new Coccidian, *Merocystis kathae*; **Dakin, 119.**

A Coccidian from the goat, phases in life-cycle described; **Stevenson, 447.**

Different forms and phases of *Achromaticus vesperuginis* (Dionisi), occurring in the blood; **Yakimoff, Stolnikoff & Kohl-Yakimoff, 522.**

The mode of development of the crescents of malignant tertian malaria, *Laverania malariae (praecox)*; **Thomson, 474.**

The sexual cycle of the aestivo-autumnal parasite in the circulating blood of Man; different forms of the parasite; **Rowley-Lawson, 396** (11 pls.). [See criticism of this account by **James (234).**]

Phases in life-cycle of *Plasmodium inui* described; **Mathis & Léger, 309.**

Ueber *Halteridium* und *Leucocytozoon* des Waldkauzes (*Syrnium aluco*) und deren Weiterentwicklung in Stechmücken (*Culex u. Stegomyia*); **Mayer, 314.**

Cytoplasmic fusion and plasmodial formation in growing gametocytes of *Halteridium* spp.; **Woodcock, 503.**

Schizogony of *Hepatozoon canis*; also sporogonic stages in the tick (*Rhipicephalus*); **Wenyon, 494.**—Schizogony of *Hepatozoon (Haemogregarina) muris*, chiefly in liver; **Franca, 180.**

Entwicklung von *Haemogregarina canis-adusti* (Russ.); **Yakimoff & Kohl-Yakimova, 519.**

Different forms of *Haemogregarina imperatoris*; **Seidelin, 422.**—Division-forms of *Hg. sternotheaeri*; **Franca, 175.**

Die Kochschen Plasmakugeln des afrikanischen Küstenfiebers sind Entwicklungs- oder Vermehrungsformen von *Theileria parva* [Cf. also **Gonder 193 & 194**]; **Meyer, 323.**

Gametogony of *Theileria parva* in the blood, copulation and further development in the tick (*Rhipicephalus*); **Gonder, 194.**—Differences in life-cycle of *Theileria parva* and *Piroplasma mutans*; comparison of the "cross-" form in the two parasites; **Gonder, 196.**

Der heutige Stand der Frage über die geschlechtlichen Vorgänge bei den Myxo- und Microsporidien (Russ. + Deutsch.); **Shiwago, 429.**

Early developing stages of the young individual from the spore, including karyogamy, in *Chloromyxum leydigi*; **Erdmann, 151.**

Zur Frage über die Cysten- und Sporenbildung bei *Glugea anomala*; **Awerinzew & Fermor, 25.**

Spore-formation in *Henneguya gigantea* n. sp.; **Nemeczek, 342.**

Studien über parasitische Protozoen. VII. Ueber Sporenbildung bei *Myxidium* sp.; **Awerinzew, 27.**

Sullo sviluppo del *Myxobolus ellipsoides*; **Lo-Giudice, 291a.**

Phases in life-cycle of *Nosema bryozoides*; **Braem, 49.**

Sporogony of the Microsporidian *Octosporea muscae-domesticae*; **Flu, 171.**—Life-history of *Octosporea muscae-domesticae* Flu and *O. monospora* n. sp.; **Chatton & Krempf, 99.**

Life-history of a new Cnidosporidian (*Paramyxa paradoxa*), remarkable for having no polar capsule; **Chatton, 192.**

Beiträge zur Kenntnis von *Pleistophora periplanetae*: Sporenbildung und Struktur; **Epstein, 150.**

Neuere Befunde aus dem Entwicklungskreis der Sarcosporidien; **Erdmann, 152.**

Minute structure of the spore of *Sarcocystis tenella*; **Alexeieff, 7.**—Cysts and spores of *Sarcocystis rileyi* (Stiles); **Crawley, 115.**

Division of the so-called spores of *Sarcocystis tenella* in old cysts, into sporozoites; **Teichmann, 469.**

Le cycle évolutif de l'Haplosporidie des *Donax (Anurosporidium pelseeneeri)*, avec copulation; **Cépède, 86.**

Life-cycle of a Sporozoan parasite of *Crenilabrus*, regarded as a *Pleistophora* [more probably a Haplosporidian]; Swellengrebel, 462.

Further details of the chromidial development and cytological changes during growth of *Lymphocystis johnstonei* Woode.; Awerinzew, 25.

*The life-history of *Cytoryctes vario-lae*; Calkins, 71.

(d) MASTIGOPHORA.

Entwicklung von Blutparasiten in Kulturen (Russ.); Marcinovski, 299.

Sur la division nucléaire de *Bodo caudatus* (Duj.); Alexeieff, 3.

Different forms of *Cercoplasma caul-teryi* n. sp.; Roubaud, 392.

Account of division in *Chilomonas paramecium*; Alexeieff, 12.

Different forms and stages in the life-history of *Crithidia* and *Herpetomonas calliphorae*; Swellengrebel, 459.—Phases in the life-history of *Herpetomonas luciliae* n. sp.; Strickland, 455.

Account of the phases in the life-history of "*Crithidia*" *pulicis*, which are passed through in the human flea; Porter, 377.

Phases in the life-cycle of *Leptomonas muscae-domesticae*; crithidial and trypaniform types, also cyst-formation: question of the connection with this form of the large, biflagellate "*Herpetomonas*"-type; Dunkerly, 142.

Phénomènes autogamiques chez les *Leptomonas* et formes affines; valeur sexuelle autogame des formes trypanosomiennes des *Leptomonades* et des formes leptomonadiennes des *Trypanosomes*; Roubaud, 394.

Formation of resistant cysts in an Insectan Trypanosome, *Cystotrypanosoma intestinalis*; Roubaud, 391.

Developmental forms of *Leishmania tropica*, as obtained in *Stegomyia* and also in cultures; Wenyon, 494.

Developmental and multiplicative forms of *Leishmania* of Kala-Azar (Italian) in *Pulex serraticeps*; Basile, 33.

Cultural characteristics of the *Leishmania* of non-ulcerating Oriental Sore compared with a similar Flagellate

parasite in a Pentatomid bug; Carter, 82.

Kultur und Modalitäten der Entwicklung der Leishman-Donovanschen Körperchen; Franchini, 183.

Division-phases in *Monocercomonas cetoniae* n. sp.; Jollos, 241.

Pleodorina californica, son cycle évolutif; Chatton, 97.

Primary and secondary cysts of intestinal Flagellates (*Trichomonas*, *Bodo*): their division and budding; Alexeieff, 13.

Sur la nature des formations dites "kystes de *Trichomonas intestinalis*." Les kystes sont en réalité un Ascomycète; Alexeieff, 5.—On the cysts of *Trichomonas*; Prowazek, 379.

Division stages and encystment in Flagellates (*Trichomonads*) of the fowl's caecum; Martin & Robertson, 303.

Liability of mistaking phases of Microsporidian parasites in Insects for resting or schizogonic phases of Flagellates (*Trypanosomes* and allied forms); Chatton, 98.

Cyst-formation in *Trypanosoma drosophilae*; Chatton & Léger, 101.

Schizogonic (auto-infective) processes in *Schizotrypanum cruzi*; Chagas, 88.—Phases in life-cycle of *Trypanosoma* (*Schizotrypanum*) *cruzi* in the bug *Conorhinus* and in the human organism; Chagas, 90.

Phases in life-history of *T. gambiense* and *T. rhodesiense*, as seen in rats and guinea-pigs; formation of latent bodies; Fantham, 153.

So-called "latent-bodies" of *Trypanosomes* in the internal organs, regarded not as normal developmental forms (phases of a life-cycle) but as involution-forms; Laveran, 271.

Developmental forms and phases of *T. gambiense* in different organs (including salivary glands) of *Gl. palpalis*; Bruce, Hamerton, Bateman & Mackie, 60.

Developmental phases of *Trypanosoma gambiense* in *Glossina palpalis*; also of *T. grayi* in the same insect; Kleine & Taute, 246.

Multiplicative periods in *T. rhodesiense*; Ross & Thomson 390.—

Periodic variations in *T. gambiense* and *T. rhodesiense*; **Fantham & Thomson, 159.**

Forms of *T. brucei* (*pecaudi*) occurring in internal organs—chiefly spleen—of the gerbil regarded as intracorpuseular and extracorpuseular ring forms (encysting); **Buchanan, 62.** [From most of the figures the Rec. would be inclined to regard them as degenerating or involution forms.]

Extension of granules from Trypanosomes (*T. brucei*-type); **Fry, 184.**

Intracellular stage in the development of *Trypanosoma lewisi* in *Ceratophyllus fasciatus*; **Minchin & Thomson, 329.**

Stages of *T. lewisi* in rat-fleas (*Ceratophyllus* and *Pulex* sp.); **Swingle, 466.**

Crithidial and herpetomonad phases in the development of *T. lewisi* in the rat-flea: "*H*" *pattoni* not a distinct parasite; **Swellengrebel & Strickland, 465.**

Sur l'existence des formes trypanosomes ("petits trypanosomes") dans les cultures de *T. lewisi*; **Delanoë, 131.**

Cultural forms of a Trypanosome of cattle; **Swellengrebel, 464.**

Cultural forms of Flagellates from cows' blood in which a Trypanosome (type *T. theileri*) was found; these gave rise, on inoculation, to Trypanosomes of a different type [probably younger forms of the same parasite]; **Behn, 40.**

Cultural forms of Trypanosomes of cattle in Greece; **Cardamatis & Photinos, 77.**

Fortpflanzungsstadien von *Trypanosoma theileri* (Russ.); **Stolinikoff, 454.**

Different forms of *Trypanosoma noctuae* of the little owl, and their connection with each other: absence of any connection with the intracellular parasites (*Halteridium* and *Leucocytozoon*); **Minchin & Woodcock, 330.**

Transformation *in vitro* des formes crithidiennes de *T. rotatorium* en formes trypanosomiques (type "*inopinatum*"); **França, 177.**

Binary fission (asexual) and multiple division (micro- and macrogametogony) of *T. rotatorium*; **Machado, 292.**

Developmental forms of different fish-Trypanosomes and also of a *Trypanoplasma* in a leech, *Hemiclepsis marginata*; **Robertson, 387.**

Details of nuclear division in *Trypanosoma chagasi* n. sp.; **Horta & Machado, 228.**

Phases resembling schizogony in *T. leptodactyli*, occurring in large mononuclear or endothelial cells; **Carini, 80.**

Formenkreis von *Ceratium tripos* var. *subsalsa* Ostf.; **Apstein, 18.**

Cyst-formation, and division in *Gymnodinium biciliatum*, n. sp.; **Ohno, 350.**

Division in *Oxyrrhis* transverse and corresponding in character to that of Dinoflagellates; **Senn, 426.**

(e) CILIOPHORA.

Phases in the conjugation of *Anoplophrya brasili*; **Collin, 111.**

Karyosom und Centriol beim Teilungsvorgang von *Chilodon uncinatus*; **Nägler, 338.**

La non-copulation du noyau échangé et du noyau stationnaire et la disparition de ce dernier dans la conjugaison de *Paramoecium caudatum*; simple échange micronucléaire; **Dehorne, 128.**

True conjugation, with nuclear fusion, at least in *Colpoda cucullus*; **Dangeard, 120** (5 text figs.).

Further discussion on the question of the nuclear behaviour during the conjugation of Infusoria; **Dehorne, 129, and Dangeard, 121.**

Assortative mating in the conjugation of *Paramoecium*; **Jennings, 238.**

Two thousand generations (divisions) of *Paramoecium*, without conjugation; **Woodruff, 506.**

Rhythms and cycles in the reproductive activity (division-rate) of *Paramoecium*; **Woodruff & Baitsell, 512.**

The reproduction of *Paramoecium aurelia* in a "constant" culture medium of beef extract; **Woodruff & Baitsell, 511.**

On the division and nuclear relations of "amiconucleate" *Paramoecia* resulting from artificial division; **Lewin, 286.**—Regeneration of *Paramoecium* after cutting; formation of monsters; **Calkins, 68.**

Le mode de division du *Strombidium sulcatum* Ch. et Lach; **Fauré-Fremiet, 167.**

Conjugation of closely related individuals of *Stylonychia*; **Baitsell, 30.**

Cell-division and cell-regeneration in *Uronychia transfuga*; **Calkins, 67.**

Behaviour of the micronucleus of Infusoria (*Uronychia*, *Stylonychia*) in regeneration; **Lewin, 285.**

ETHOLOGY. 0419

Biology, habits, behaviour.

On the biology of edaphic (earth-inhabiting) Rhizopoda; **Francé, 181.**

Mode of life of certain Amoebae from dysentery and liver-abscesses; their association with particular micro-organisms; **Liston & Martin, 290.**

Protozoa occurring in the soil; the Ciliates exist in an encysted condition; **Goodey, 198.**

Biological notes on *Monocystis rostrata*; relation of the life-cycle to seasonal periods; **Mulsow, 334.**

On the production, life and death of the crescents of the parasite of pernicious malaria; **Thomson, 474.**

On the appearance of various Flagellates in different infusions and scums; **Alexeieff, 12.**

Synura, conditions of growth in Lake Cochituate, Massachusetts; **Parker, 355.**

Notes on the behaviour of the Trypanosome (*T. noctuae*), *Halteridium* and *Leucocytozoon* of the little owl; **Minchin & Woodcock, 330.**

Sur la survie du *Trypanosoma brucei* dans quelques milieux d'origine biologique et non biologique; **Fleig, 170.**

Biologische Studie über *Ceratium tripos* var. *subsalsa* Ostf.; **Apstein, 18.**

Notes on the bionomics of Infusoria (seasonal variation, manner of dispersal, etc.); **Enriques, 147.**

A note on learning in *Paramoecium*; **Day & Bentley, 124.**

Habits and reactions of the Ciliate, *Lacrymaria*; **Mast, 304.**

The Protozoan plankton of the ocean, particularly Dinoflagellates, Radiolaria and Tintinnoidea, with especial reference to their numerical abundance; **Hensen, 219.**

Plankton.

Nordische Ciliata mit Ausschluss der Tintinnoidea; **Hamburger & Buddenbrock, 210.**

Dinoflagellates in plankton, Second Norwegian Arctic Exped. 1898-1902; **Gran, 199.**

Marine plankton from the East-Greenland Sea (W. of 6° W. long. and N. of 73° 30' N. lat.) collected during the "Danmark Expedition" 1906-1908. I. Flagellates. II. Foraminifera, Radiolaria, Tintinnoidea; **Ostenfeld, 351.**

North Sea, Protozoa, chiefly Dinoflagellates; **Mielck, 325.**

Plankton, South end Isle of Man, seasonal occurrence of *Ceratium*, *Peridinium* and *Noctiluca*; **Herdman & Scott, 221.**

Die farbigen Flagellaten des Kieler Hafens; **Büttner, 64.**

The marine Flagellate *Phacomonas pelagica* in fresh water; **Pascher, 358.**

Über Nannoplanktonen des Süßwassers; **Pascher, 359.**

Das Phytoplankton des Süßwassers mit besonderer Berücksichtigung des Vierwaldstättersees; **Bachmann, 28.**

Adriatic, *Coccolithophoridae*, with *Syracosphaera lohmanni* n. sp.; **Brunnthal, 61.**

Adriatic, Istrian and Dalmatian coast, Dinoflagellates; **Schröder, 415.**

Radiolarien aus der Adria; **Stiasny, 451.**

Adriatic, mostly Dalmatian coast, Foraminifera in plankton; **Stiasny, 450.**

Adriatic (Ragusa), on a Copepod, *Tokophrya steueri* n. sp.; **Schröder, 416.**

River Po, Protozoa in plankton; **Padovani, 353.**

Plankton, Retiro ("estanque grande"), Madrid, Protozoa; **Moreno, 332.**

Spirodinium? sp. and *Pouchetia* sp., chief constituent organisms of the "red tide" (Japanese); **Nakazawa, 339.**

Commensalism.

Ectoparasitic (or commensal) on various pelagic *Hoplophoridae* (*Systelapsis*, *Acanthephyra*), *Ellobiopsis caridarum* n. sp.; parasitic on *Pasiphaea tarda*, *E. racemosus* n. sp.; **Contièrre, 112.**

Commensal with *Pyrosoma giganteum*, in buccal siphons, *Conchophrys davidoffi* n. g., n. sp.; **Chatton, 95.**

Parasitism.

Hosts of parasitic *Amoebae*, including new forms; **Walker, 485.**

List of hosts of Gregarines (supplementary to Labbé's list 1899); **Sokolow, 440.**

Plantae.

In *Euphorbia pilulifera* (Dahomey), latex, *Leptomonas davidi* Lafont; **Bouet & Roubaud, 48.**—In *E. peplus* and *E. segetalis* (Portugal), latex, *Leptomonas davidi*; **França, 178.**

Présence de *Leptomonas* dans le latex d'une Euphorbe congolaise; **Rodhain & Bequaert, 389.**—Présence à la Martinique de *L. davidi*; **Noc & Stévenel, 347.**

Protozoa.

In *Amoeba*-cysts, a Microsporidian indet.; **Nägler, 336.**

In *Euglena sanguinea*, *Chytridiaceae* (*Sphaerita* sp.); **Nägler, 337.**

In *Paramoecium* sp., a Bacterial parasite, *Drepanospira mülleri* n. g., n. sp.; **Petschenko, 366.**

In *Cestus veneris*, perradial canals, a new Ciliate *Perikaryon cesticola*; **Chatton, 95.**

In *Diphyes elongata* (Will), *Trypanophis* (*Trypanoplasma*) *grobbeni*; **Poche, 370.**

Turbellaria.

Astasia captiva, n. sp. Euglénien parasite de *Catenula lemnæ* Ant. Dug.; **Beauchamp, 38.**

Chaetopoda.

In a new Oligochaete, *Isochaeta virulenta*, in body cavity chiefly of genital segments, Flagellate parasites inc. sedis; **Pointer, 372.**

In the earthworm *Kynotus pittarellii* (Madagascar), body-cavity, *Taeniocystis legeri* n. sp.; **Cognetti de Martiis, 110.**

In epithelium and body-cavity of *Lumbricus variegatus*, a new Protozoan, *Spirocystis nidula*, n. g. n. sp.; **Léger & Duboscq, 282.**

In *Lumbricus terrestris*, seminal vesicles, *Monocystis rostrata* n. sp.; in body-cavity, hinder segments, *M. catenata* n. sp.; **Mulsow, 334.**—In *L. variegatus* (Bernex), digestive tract, *Mesnilella cepedei* n. sp.; **André, 15.**

In a Polychaete larva (*Ophelia*?), intestinal cells, a new Cnidosporidian, *Paramyxa paradoxa* n. g., n. sp.; **Chatton, 92.**

In *Pareudrilus pallidus*, seminal vesicles, *Monocystis pareudrili* n. sp., and *Rhynchocystis hessei* n. sp.; **Cognetti de Martiis, 109.**

Gregarinen aus *Polycirrus albicans*, *Brada granulata*, *Phascolosoma hanseni*, *Travisia forbesi* (Russ.); **Mavrodiadi, 313.**

In *Rhinodrilus* (*Thamnodrilus*) *incertus*, body-cavity, *Monocystis thamnodrili* n. sp.; **Cognetti de Martiis, 109.**

In *Slavira appendiculata*, body-cavity, *Adelina octospora* n. g., n. sp.; **Hesse, 224.**

In *Zeppelinina branchiata*, intestinal epithelium, Gregarines unsp.; **Sokolow 440.**

Crustacea.

Ectoparasitic on various bathypelagic Crustacea, (Azores and Gulf of Gascony), new *Ellobiopsidae*; **Contièrre, 112 & 113.**

In Copepods (chiefly *Calanus* and *Paracalanus*), gut and body-cavity, various Gregarine, Flagellate, Ciliate,

Microsporidian and Ichthyosporidian parasites, not sufficiently described for specific determination; **Apstein, 19.**

In Copepods of the North Sea and Baltic (*Calanus*, *Pseudocalanus*, *Paracalanus*, *Centropages* and *Acartia clausi*), digestive tube, a parasite observed by Apstein, regarded as *Blastodinium hyalinum*; **Chatton, 93.**

In *Diaptomus castor*, body-cavity (cephalo-thorax), *Gurleya richardi* n. sp.; **Cépède, 87.**

In *Cyclops* and *Daphnia*, intestinal epithelium, a Sporozoan parasite [most likely a parasitic Dinoflagellate (cf. *Blastodinium*)]; **Grandori & Grandori, 200.**

In *Gammarus marinus*, intestine, *Cephaloidophora* (syn. *Frenzelina*) *maculata* n. sp.; **Léger & Duboscq, 281.**

In *Atyephyra desmaresti*, fresh water, intestine, *Cephaloidophora cuenoti* n. sp.; **Mercier, 316.**

Myriapoda.

In *Scolopendra subspinipes* (Aru Islds.) intestine, *Pterocephalus indicus* n. sp.; **Merton, 317.**

Insecta.

Arthropoda (Myriapods and Insects) of East Prussia as hosts of Sporozoa (mostly Gregarines); **Wellmer, 490.**

In *Auchmeromyia luteola*, intestine, *Cercoplasma caulleryi* n. sp.; **Roubaud, 392.**

In flies (*Calliphora coloradensis* and *Sarcophaga sarraceniae*), digestive tract, *Herpetomonas calliphorae* and *lineata* n. spp.; **Swingle, 466.**—In *Calliphora erythrocephala* ("blue-bottle"), gut, *Crithidia calliphorae* n. sp.; **Swollen-grebel, 459.**

In *Calotermes castaneus* (Honolulu), *Parajoenia grassii* n. g., n. sp.—In *C. grassii* (Chili), *Stephanonympha silvestrii* n. g., n. sp.; **Janicki, 235.**—In *Calotermes flavicollis*, *Mesojoenia decipiens* n. g., n. sp. and *Microrhopalodina enflata* n. g., n. sp.; **Grassi & Foa, 201.**

In *Cetonia* (larva), intestine, *Mono-cercomonas cetoniae* n. sp.; **Jollos, 241.**

Hemiptera (*Dieuches humilis* Reuter) found to transmit *Leptomonas davidi*

from one *Euphorbia*-plant to another; **Bouet & Roubaud, 48.**

In *Drosophila confusa* and *plurilineata*, intestinal wall, Malpighian tubes and genital organs, *Octosporea muscae-domesticae* and *O. monospora* n. sp.; **Chatton & Krempf, 99.**—In *D. ampelophila*, *plurilineata* and *transversa* var. *phalerata*, *Leptomonas* spp.; **Chatton & Léger, 100.**—In *D. rubrostriata*, *Leptomonas rubrostriatae*; in *D. ampelophila*, *L. ampelophilae* n. spp.; **Chatton & Léger, 480.**

In caddis-fly larvae, intestine, *Embadomonas agilis* n. g., n. sp., *Crithidia campanulata* Léger, *Entamoeba* sp., and (in fat-bodies) *Gurleya legeri*; **Mackinnon, 293.**

In a Pentatomid bug (*Erthesina fullo*) (all phases), Flagellate parasites agreeing closely with the forms of *Leishmania* developed in cultures of non-ulcerating Oriental Sore; **Carter, 82.**

Gl. morsitans also acts as a true host for *T. gambiense*; **Taute, 468.**

In *Homalomyia canicularis*, *Leptomonas muscae-domesticae*, also "*Herpetomonas*" m.-d.; **Dunkerly, 142.**

In *Lucilia* sp. (perhaps *sericata*), *Cystotrypanosoma intestinalis* n. g. n. sp.; **Roubaud, 391.**—In *Lucilia* sp. (green-bottle fly), digestive tract, *Herpetomonas luciliae* n. sp.; **Strickland, 455.**

Relation of the young forms of *Gregarina polymorpha* to the host-cells (intestinal epithelium) of the meal-worm; **Ishii, 231.**

In *Musca domestica* (Dutch E. Indies), alimentary canal, also ovaries, *Octosporea muscae-domesticae*, a new Microsporidian; **Flu, 171.**

In *Pterostichus niger*, alimentary canal, *Gigaductus exiguus* n. sp.; in *Crypticus squilius* alim. canal, *Gregarina ovoidea* n. sp., in *Lagria hirta*, alim. canal, *G. rostrata* n. sp.; **Wellmer, 490.**

In *Pulex irritans*, digestive tract, "*Crithidia*" *pulicis* n. sp. [most probably the trypanomonad phase of some Trypanosome]; **Porter, 377.**

Pulex serraticeps (and probably also *irritans*) most likely the alternate

hosts (transmissive agents) of *Leishmania* of Mediterranean Kala-Azar; **Basile, 33.**

In *Pycnosoma* spp., a Leptomonad regarded as distinct, *L. soudanensis* n. sp.; **Roubaud, 393.**

In *Simulium hirtipes* (larvae), filling up entire body-cavity, *Glugea polymorpha* n. sp.; **Strickland, 457.**

In *Stegomyia fasciata*, gut, *Lankesteria culicis*; **Wenyon, 493.**

In *Tabanus secedens* and *thoracinus*, gut, Crithidial parasites [probably phases of some Trypanosome]; **Bruce, Hamerton & Bateman, 56.**

Polyzoa.

Parasitismus von *Nosema bryozoides* in den Hodenzellen von *Plumatella repens* var.; Verhältnis zur Wirtszelle; **Braem, 49.**

Mollusca.

In the whelk (*Buccinum undatum*), renal organ, a new Coccidian (*Merozystis kathae* n. gen. et sp.); **Dakin, 119.**

In snails (*Helix* and *Limnaea* spp.), Mid-Europe, various genital organs, *Trypanoplasmata* with new forms; **Kühn, 260.**

In *Littorina* sp., *Balanitidium littorinae* [n. sp. ?]; **Chagas, 89.**

In *Vittrina elliptica* (?), renal epithelium, *Klossia vittrina* n. sp.; **Moroff, 333.**

Pisces.

In various fishes (fresh-water, Austria and Adriatic sea) especially on the gills, Myxo- and Microsporidia, with new forms **Nemeczek, 342.**

In various fishes, Tonkin, new Trypanosomes: the following are named, *T. roulei* from *Monopterus javanensis* and *T. pellegrini* from *Macropodus viridi-auratus*; **Mathis & Léger, 311.**—Trypanosomes of fishes, Tonkin; **Mathis & Léger, 308.**

Known Piscine hosts of Myxosporidia; **Auerbach, 23.**

Myxosporidia of fishes of the Lake of Lucerne; **Nufer, 348.**

Fischparasiten, Ladoga-See (Finnisch); **Jääskeläinen, 232.**

In Australian fish, new species of Trypanosomes; **Johnston & Cleland, 240.**

Trypanosomes de poissons brésiliens avec *T. hypostomi* n. sp.; **Splendore, 442.**

Ein neuer Gehirnparasit des Karpfens (*Lentospora encephalica* sp. n.); **Mulsow, 335.**

In a Silurid fish (*Clarias macrocephalus*), *Trypanoplasma clariae* n. sp.; **Mathis & Léger, .**

In *Crenilabrus melops*, liver and between muscle-layers of body-wall, *Pleistophora labrorum* n. sp.; **Le Danois, 279.**—In *Crenilabrus melops*, skin and mesentery, a Sporozoan regarded [probably wrongly] as a *Pleistophora (gigantea)* Thél.; **Swellengrebel, 460 & 462.**

In *Osmerus eperlanus*, subcutaneous tissue and body-cavity, *Glugea hertwigii* n. sp.; **Weissenberg, 488.**

In *Plecostomus punctatus* (Brazil), *Trypanosoma chagasi* n. sp.; **Horta & Machado, 228.**

In *Solea monochir*: *Trypanosoma dohrni* sp. n.; in *Syngnathus acus*: *T. sp. n.* (Russ.); **Yakimoff, 518.**

Amphibia.

New Haematozoa from Amphibia and Reptiles, morphological notes; **França, 175.**

Haemogregarines of Amphibia (*Rana* spp.), Tonkin; **Mathis & Léger, 311 & 312.**—Trypanosomes from Amphibia and Reptiles, Tonkin; **Mathis & Léger, 311.**

Trypanosomes of frogs and toads, Tonkin; in *Bufo melanostictus*, *T. chattoni* n. sp.; **Mathis & Léger, 310.**—In *B. m.* (Tonkin), *Tryp. bocagei* varr. n. *parva* and *magna*; **Mathis & Léger, 307.**

In Axolotl, intestine, *Rhizomastix gracilis* n. g., n. sp.; **Alexeieff, 12.**

In *Bufo regularis* (Portuguese Guinea), *Hg. pestanae* n. sp., *Tryp. bocagei* n. sp., and *Toddia bufonis* n. g., n. sp.; **França, 175.**—In *B. regularis* (Khartoum), various Protozoa; **Stevenson, 448.**

In *Bufo vulgaris* and *calamita*, *Trichomonas angusta*, in *Triton marmoratus* and *cristatus*, *T. tritonis*, in *Haemopsis sanguisuga*, *T. sanguisugae*, n. spp.; Alexeieff, 10.

In *Triton* spp., *Salamandra* and *Discoglossus*, cysts regarded as of Flagellate nature (either *Bodo* or *Trichomonas*) and not vegetable; Alexeieff, 13.

In *Triton taeniatus*, intestine, *Poly-mastix batrachorum* n. sp.; Alexeieff, 12.

Reptilia.

Hémogrégarines de Reptiles et des Batraciens du Tonkin; Mathis & Léger, 312.

In *Boa imperator*, *Haemogregarina imperatoris* [n. sp.]; Seidelin, 421.

In a viper (*Cerastes cornutus*), *Haemogregarina seurati* n. sp.; Laveran & Pettit, 274.

Haemogregarines of *Chelonia* (*Ocadia sinensis* and *Trionyx cartilagineus*), of *Ophidia* (*Bungarus fasciatus* and *Hypsirhina chinensis*); Mathis & Léger, 312.

The crocodile is the Vertebrate host of *Trypanosoma grayi*; Kleine & Taute, 246.

In *Lacerta* sp., blood-plasma, amoeboid and irregular, perhaps flagellate bodies [possibly contamination with, or unusual presence of, intestinal parasites]; Seidelin, 421.

In *Mabuia perroteti*, *Tryp. perroteti* n. sp.; França, 175.

In a tortoise (*Sternotherus derbianus*), Portuguese Guinea, *Haemogregarina sternotheri* n. sp.; França, 195.—In *Varanus niloticus* (Portuguese Guinea), *H.* sp.; id. 175.

In *Testudo graeca*, *Balantidium testudinis* [n. sp. ?]; Chagas, 89.

Aves.

In various birds, *Leucocytozoon zie-manni* [and probably other spp.]; Cardamatis, 72.

In various birds, Tonkin, *Halteridium* spp. indet.; Mathis & Léger, 311.

In various birds, Tonkin, *Leucocytozoon* spp., including *L. kerandeli* from

Francolinus sinensis and *dubreuili* from thrush, n. spp.; Mathis & Léger, 311.

In various birds, Tonkin, Trypanosomes with new species; Mathis & Léger, 306 & 311.

In various Japanese birds, intracellular blood-parasites (*Halteridium*, *Leucocytozoon* and *Proteosoma*) and Trypanosomes; Ogawa, 349.

In various birds (Brazil), mononuclear leucocytes, new Haemogregarines; Aragao, 20.

Trypanosomes of the trumpeter hornbill (*Bycanistes buccinator*); Dutton, Todd & Tobey, 143.

In domestic fowl, caecum, *Trichomonas gallinarum*, *Trichomastix gallinarum* and *Chilomastix gallinarum*, n. spp.; Martin & Robertson, 303.

Trypanosomen in Hühnern (u. a. *Tr. numidae* sp. n.); Haan, 206.

In a "laughing jackass" (*Dacelo gigas*), *Halteridium* sp.; Welsh & Priestley, 492.

In an eagle (*Haliastur vocifer*), French Congo, *Leucocytozoon audieri* n. sp.; Laveran & Nattan-Larrier, 273.

In peacock, *Ardetta sinensis*, and *Munia topela*, Tonkin, new species of *Leucocytozoon*; Mathis & Léger, 306.

In *Lanius excubitor* (butcher-bird) and goldfinch, Trypanosomes, spp. indet.; Cardamatis, 74.

Leucocytozoon des oiseaux (*Nycticorax* n., *Centropus senegalensis*) du Congo français; Aubert & Heckenroth, 22.

In partridge and marsh-bird, Trypanosomes; Plimmer, 369.

Occurrence of *Halteridium* in a sparrow (*Passer domesticus*), apparently the first observation of this parasite in Swiss birds; Galli-Valerio, 187.

In *Syrnium aluco*, *Halteridium syrnii* n. sp.; Mayer, 314.

Mammalia.

Blutprotozoen bei Säugetieren (Holländisch); Vrijburg, 481.

In blood of various animals (chiefly Marsupials), the bodies known as *Anaplasma marginale*; possibly not

parasitic Protozoa at all; **Gilruth, Sweet & Dodd, 190.**

A Sarcosporidian in the opossum; **Darling, 123.**

Le rôle des Carpinchos (Capybara) comme réservoir de virus (hôte alternative) dans la conservation du mal de Caderas (*T. equinum*); **Migone, 326.**

Im Blute des Iltis, ein neuer Parasit, *Microsoma mustelae*, mit Beziehungen zu den Piroplasmen; **Lebedeff & Tscharnotzky, 278.**

In *Mus decumanus*, *Trichomonas parva* n. sp.; **Alexeieff, 10.**

In *Spermophilus musivus, guttatus* and *eversmanni*, *T. spermophili* n. sp.; **Laveran, 272.**

In *Erinaceus algirus*, *Piroplasma weissii* n. sp.; **Galli-Valerio, 186.**

Piroplasma im Blut der Schweine; **Dementjeff, 133.**

In ponys (from Togoland), *T. frobenius* n. sp.; **Weissenborn, 489.**

In goats (German E. Africa), *Trypanosoma caprae* n. sp.; **Kleine & Taute, 246.**

In oxen (Uganda), *Trypanosoma uniforme* n. sp.; **Bruce, Hamerton, Bateman & Mackie, 57.**

Antelope (water-buck, bush-buck and reed-buck) as "potential" hosts of *T. gambiense*; **Bruce, Hamerton & Bateman, 54.**

Ein neues, bei Rindern in Uruguay (Südamerika) gefundenes *Trypanosoma*; **Peter, 365.**

Occurrence of Trypanosomes in *Bovidae*:—in France; **Delanoë, 132**: in Sao Paulo; **Carini, 79**: en Hollande; **Swellengrebel, 463**; also **Wester, 496**; also **Vrijburg, 482**: in Greece; **Cardamatis & Photinos, 76**: in Algeria; **Sergent & Sergent, 427**: in Tunis; **Yakimoff & Kohl-Yakimoff, 521.**

Existence de la *Leishmania* chez les chiens d'Alger; **Sergent & Sergent, 428.**

Haemogregarina [Hepatozoon] *canis-adusti* in den weissen Blutkörperchen des Schakals (Russ.); **Yakimoff & Kohl-Yakimova, 519.**

In monkey (Samoa), intestine, a new Flagellate, *Fanapepea intestinalis*; **Prowazek, 379.**

In *Macacus rhesus* and *M. lasiotis tcheliensis* (Tonkin), *Plasmodium* (cf. *inui*); **Mathis & Léger, 309.**

Remarkable habitat of *Schizotrypanum cruzi*, in human muscular and nervous systems; **Chagas, 88.**

From human faeces (Sawail), *Entamoeba williamsi* n. sp.; **Prowazek, 378.**

In a still-born infant, *Entamoeba mortinatalium* n. sp.; **Smith & Waidman, 438.**

VARIATION, PHYLOGENY.

0423

Heredity, Variation.

Some problems of evolution in the Protozoa; **Minchin, 327.**

Protozoan germ-plasm; **Calkins, 70.**

Variation in different species of *Frondicularia*, according to particular types; **Dettmer, 137.**

Inheritance of akinetonuclearity in Trypanosomes; **Kudicke, 258.**

Variability in *Ceratium*; **Jørgensen, 239.**

Variability and inheritance of size in the conjugation of *Paramoecium*; **Jennings, 237.**

Characteristics of the diverse races of *Paramoecium*; **Jennings & Hargett, 238.**

Variations and teratogenic factors in Acinetans (*Tokophrya*, *Discophrya* and *Paracinetia*); **Collin, 110a.**

Classification, Phylogeny.

On the classification of the Protozoa; **Hartmann, 215.**—Classificatory notes on Protozoa; **Emery, 146.**

Bases of a natural classification of the Foraminifera; **Rhumbler, 384.**

Nature and form of shell or test as an aid to the classification of arenaceous Foraminifera; **Fauré-Fremiet, 168.**—Classificatory revision of the *Textularidae*, based on the nature of the test; **Fauré-Fremiet, 166.**

Classification of the Coccidia; **Léger**, 280.

The term *Acnidosporidia* proposed for the *Haplosporidia* and *Chytridiopsis*, to distinguish them from the *Cnididosporidia*; **Cépède**, 86.

Signification phylogénétique de *Pleodorina californica*; **Chatton**, 97.

On the classification and distinction of Mammalian Trypanosomes; **Laveran**, 272.

Classification of the Trichonymphids; **Grassi & Foa**, 201.

DISTRIBUTION (GEOGRAPHY).

0427

[See also under "Parasitism" 0419.]

Geographical.

Distribution of the sedentary Foraminiferan *Polytrema* and allied genera; **Hickson**, 225.

Unsere heutigen Kenntnisse über die geographische Verbreitung der Myxosporidien; **Auerbach**, 23.

Europe.

Clare Island (W. Coast of Ireland), Mycetozoa; also list of Irish species; **Lister**, 289.

Clare Island (W. Coast of Ireland), Rhizopoda; comparison with their occurrence in Great Britain; list of known Irish species; **Wailes & Penard**, 484.

Scotland, fresh-water Rhizopoda and Heliozoa with remarks on distribution; **Brown**, 50.

Wemyss Bay, Clyde, the Foraminiferan *Bathysiphon filiformis*, Sars, thought to be new to Britain; **Robertson**, 386.

Port Erin (Isle of Man), occurrence of *Amphidinium operculatum* in vast quantity; **Herdman**, 220.

South Midlands, distribution and records of Mycetozoa; **Saunders**, 404.—Herts., St. Albans and neighbourhood, Mycetozoa and Rhizopods; **Hopkinson**, 227.

Pleodorina californica à Banyuls-sur-Mer; **Chatton**, 97.

Edaphic Rhizopoda from various soils throughout Middle Europe; **Françé**, 181.

Bernese Oberland (Faulhorn district), lakelets, Protozoa; **Steiner**, 445.

Sarcodinés de la Suisse; **Penard**, 364.

In sea-water from Trieste, two new Ciliates, *Blepharisma clarissima* and *Coelosoma marina*; **Anigstein**, 17.

Schalenträgende Foraminiferen von der Westküste Istriens; **Wiesner**, 502.

Adriatic (Rovigno), Foraminifera; **Schaudinn**, 405.

Adriatic, S. Pelagio bei Rovigno (3m.), Foraminifera von dem Sandgrunde; **Wiesner**, 501.

Rhizopoda Testacea aus der Umgebung der Stadt Tambov (Russ.); **Troicki**, 475.

Asia.

Kulturamöben aus Manila, mit einer neuen Mastigamoeba (*Trimastigamoeba*); **Whitmore**, 499.

Africa.

Présence à la Martinique de *Leptomonas davidi* Lafont; **Noc & Stévenel**, 347.

Sierra Leone, fresh-water Rhizopods; **Penard**, 362.

America.

Dinoflagellata of the San Diego region, California. *Gonyaulax*, with new species; **Kofoed**, 249.

Oaxaca and neighbourhood (Mexico), Rhizopods of the moss-fauna; **Heinis**, 218.

Oceanic.

Jones Sound, King Oscar's Land etc. (Norwegian 2nd Arctic Exped.), Foraminifera; **Kiaer**, 244.

Siberian Polar Sea (Russian Exped. 1900–1903), Foraminifera; **Awerinzew**, 26.

Atlantic, die tripyleen Radiolarien der Plankton-Expedition. *Challengeridae*; **Borgert**, 47.

Foraminifera of the North Pacific ocean. Pt. II. *Textulariidae*; **Cushman**, 116.

Eastern Tropical Pacific, new genera and species of Dinoflagellates (expedition in charge of A. Agassiz, U. S. Fish. Commission Steamer "Albatross" (1904-1905); **Kofoed & Michener**, 251.

Funafuti (deep-water soundings around), Foraminifera; **Chapman**, 91.

Indian Ocean, Xenophyophora; **Schepotieff**, 410.

Antarctic (Shackleton's expedition, 1907-1909), fresh-water Rhizopoda; **Penard**, 363.

Région antarctique, *Cothurniopsis antarctica* et *C. subglobosa* n. spp.; **Daday**, 117.

Antarctic, Deception Isle (French Expedition of Dr. Charcot), Foraminifera **Fauré-Fremiet**, 165.

Geological.

General.

Tabulated list of Foraminifera described, occurring in the shore-sands, Selsey Bill, Sussex; **Heron-Allen & Earland**, 223.

Recent and Fossil Foraminifera, shore-sands, Selsey Bill, Sussex (supplemental); **Heron-Allen & Earland**, 222.

Geographical and fossil distribution of two species of *Lepidocyclina* (*L. dilatata* and *lournoueri*) common in the Tertiary of Italy; **Silvestri**, 435.

Quaternary.

Estuarine Clays, Magheramorne, Co. Antrim, and Limavady Sta., Co. Derry, Foraminifera; **Wright**, 515.

Boulder Clays, North of Ireland, Foraminifera; **Wright**, 514.

Tertiary.

Les Foraminifères dans le Tertiaire des Philippines; **Douvillé**, 141.

Tertiär, Bismarckarchipel und einige angrenzende Inseln, Foraminiferen mit neuen Formen; **Schubert**, 418.

Oligocene, Campofiorito (Palermo), Foraminifera; **Checchia-Rispoli**, 106.

Post-Eocene, East-coast of Borneo, *Orbitoides* spp. with new forms; **Rutten**, 397.

Mitteloecänen Mergel von Norddalmatien, die Foraminiferenfauna; **Liebus**, 288.

Foraminiferen der pannonischen Schichten der Umgebung des Balaton-sees; **Lörenthey**, 291.

Eocene, Bagheria (Palermo), Foraminifera; **Checchia-Rispoli**, 105.

Secondary.

Chalk, near Louth (Lincolnshire), Foraminifera; **Carter**, 81.

Cretaceous (Kreidemergel), Eybrunn (Regensburg), Foraminifera; **Egger**, 144.

Triasforaminiferen aus dem Bakony mit neuen Formen; **Vadász**, 478.

Primary.

Upper Carboniferous, Darwas (Asia), *Fusulinae*; **Schellwien** u. a., 408.

Carbonic, Magdalen islands, Foraminifera with *Nodosinella clarkei* n. sp.; **Beede**, 39.

Carboniferous (Wewoka formation), Oklahoma, Foraminifera with *Fusulina inconspicua* n. sp.; **Girty**, 192.

III. SYSTEMATIC. 0431

PROTOZOA, GENERAL.

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XENOPHYOPHORA.

Xenophyophora, regarded as allied to Mycetozoa, account of structure of *Psammietta*, *Stannophyllum*; SCHEPOTIEFF Zool. Jahrb. Abth. Anat. 32 pp. 245–286 pls. xv & xvi.

(a) Amœbaea (Reticulosa+Lobosa).

Amoebae, parasitic forms, hosts, cultivation, specific distinctions and synonymy, pp. 379–441 pls. xxia–xxiv; *A. cobayae* p. 442 pl. xxiii

(N-9186 e)

fig. 10, *enterica* p. 443 fig. 9, *fecalis* p. 444 pl. xxiv figs. 13 & 14, *gallopavonis* p. 444 fig. 15, *hominis* p. 444, *intestinalis* p. 445 pl. xxiii fig. 8, *musculi* p. 447 fig. 11, *ranae* (perhaps identical with *ranarum*) p. 447, spp. n.; WALKER J. Med. Res. 17 (N. Ser. 12).—*A. densa* p. 588 text-figs. 23–25, *circumgranosa* p. 589 figs. 26–29, spp. n., *punctata* Dang. p. 455 figs. 1–22 (p. 589), *limax* Duj. (emend. Vahlkampf) p. 534 figs. 30–40 (p. 589), morphological characters and modes of nuclear division compared; ALEXEIEFF C. R. Soc. Biol. 70.—*A. hartmanni* sp. n., “Almtümpel,” Lunz, diagnosis and nuclear details; NÄGLER Arch. Protistenk. 22 pp. 56–70 pl. vii.—*A. hydraxena* sp. n., mode of nutrition, morphology; ENTZ Állatt. Közlem. 10 pp. 138–141 & 169, also Math. Term. Ért. 29 pp. 836–868 pls. vii & viii.—*A. limax*, Manila, morphological notes; WHITMORE Arch. Protistenkunde 23 pp. 81–85 pl. iii.—*A. minuta* sp. n., occurrence and life-cycle; POPOFF Arch. Protistenk. 22 pp. 197–211 pls. xiii & xiv and 5 text-figs.—*A. proteus*, eigenartige Körperformen; GRUBER Arch. Protistenkunde 23 pp. 253–261 4 text-figs.—*A. spp.*, from dysenteric sources, and also free-living, cultural characters and behaviour compared; endogenous budding and mode of division; LISTON & MARTIN Q. J. Microsc. Sci. 57 pp. 107–128 pls. xvi–xviii.—*A. spp.* notes on forms developed on culture-media exposed to air; WELLS Parasitol. 4 pp. 209–217 pl. vi. [See also under *Entamoeba*.]

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Diffugia lingula p. 302 pl. x fig. 6, *echinulata* p. 304 fig. 8, spp. n., Sierra Leone; PENARD J. Quek. Microsc. Cl. Ser. 2 **11**.

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Euglypha armata p. 37 pl. iii fig. 16 *bryophila* (Brown, sp. n.) p. 38 fig. 17, *rotunda* p. 41 pl. iv fig. 19, *scutigera* (Penard sp. n.) p. 41 fig. 20, spp. n., *strigosa* var. n. *muscorum* p. 42, *cristata* var. n. *major* pp. 40 & 62; WAILES & PENARD Proc. R. Irish Acad. **31** (Clare Island Survey 65).—*E. bryophila* sp. n., occurrence and diagnosis; BROWN J. Linn. Soc. Zool. **32** p. 82 pl. ix figs. 14 & 15.

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†*Assilina gemmellaroi* p. 143 pl. iv fig. 7, *subgemmellaroi* p. 144 fig. 8, spp. n. Tertiary, Bagheria; CHECCHIA-RISPOLI Giorn. Sc. nat. econ. 28.

†*Bifarina adalae* sp. n. Eocän, Norddalmatien; LIEBUS SitzBer. Ak. Wiss. Wien Abth. I 120 p. 924 pl. i

(N-9186 c)

fig. 15.—*B. hungarica* sp. n. Trias, Bakony; VADÁSZ Res. wiss. Erforsch. Balatonsees 1 i Anhang Palaeontol. 1 p. 16 pl. i figs. 9 & 10.

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†*B. haddoniana* sp. n. Estuarine Clay Limavady (also Recent); WRIGHT Belfast Rep. Nat. F. Cl. Ser. II 6 iv (Appendix No. 2) p. 14 pl. ii fig. 22.

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✕ *Buliminella* gen. n. (*Bulimininae*) genotype *Bulimina elegantissima* Brady, North Pacific; CUSHMAN Bull. U. S. Nation. Mus. 71 p. 88.

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†*Cristellaria tricarlinella* Rss. var. n. *striata* Eocän, Norddalmatien; LIEBUS SitzBer. Ak. Wiss. Wien Abth. I 120 p. 914 pl. i figs. 4 & 5.

†*Cymbalopora hungarica* p. 30 pl. ii figs. 1–3 18 & text-fig. 20, *oblonga* p. 31 pl. i fig. 33, spp. n., Trias, Bakony; VADÁSZ Res. wiss. Erforsch. Balatonsees 1 i Anhang Palaeontol. 1.—*C. radiata* Hag. var. n. *minima* Mittel-eocän, Norddalmatien; LIEBUS SitzBer. Ak. Wiss. Wien Abth. I 120 p. 952 pl. iii fig. 7.

Dendrophrya tolli sp. n. Siberian Polar Sea; AWERINZEW Mem. Ac. Sci. St. Petersburg Ser. 8 29 3 p. 13 fig. 1.

Discorbina wrightii var. n. *spinifera*, *imperatoria* var. n. *nuda*, Adriatic (Istrian coast); WIESNER Zool. Anz. 38 pp. 509 & 510.

†*D. inaequilateralis* sp. n. p. 328 pl. xi figs. 3–5, *patelliformis* Brady var. n. *corrugata* p. 329 pl. x figs. 22–24, *rosacea* (d'Orb.) var. n. *selseyensis*, occurrence and notes; HERON-ALLEN & EARLAND J. R. Microsc. Soc. 1911.—*D. millettii* sp. n., Estuarine Clay, Limavady (also Recent); WRIGHT Belfast Rep. Nat. F. Cl. Ser. II 6 iv (Appendix No. 2) p. 13 pl. ii figs. 14–17.

†*Ehrenbergina foveolata* sp. n. Tertiary, Neu-Mecklenburg; SCHUBERT Abh. geol. Rchsanst. 20 H. 4 p. 61 pl. vi fig. 1.

†*Ellipsoidella* H.-A. & E., syn. *Ellipsopleurostomella* Silv.; HERON-ALLEN & EARLAND J. R. Microsc. Soc. 1911 p. 317.

†*Flintia* nom. n. ex aff. *Spiroculina* (*S. robusta* Brady), Tertiary, Sainabas; SCHUBERT Abh. geol. Rchsanst. 20 H. 4 p. 124.

Fronicularia spp. *inversa*, *angusta* and cf. *strigillata*, variation-forms; DETTMER N. Jahrb. Min. 1911 1 pp. 149–159 pl. xii.

†*F. acuta* sp. n. Trias, Bakony; VADÁSZ Res. wissensch. Erforsch. Balatonsees 1 i Anhang Palaeont. 1 p. 24 pl. i fig. 22.

†*Fusulinae*, Upper Carboniferous, Darwas (Asia), described, with special reference to shell structure; SCHELLWIEN & OTHERS Palaeontogr. 56 pp. 159–176 pls. xiii–xvi.—*F. inconspicua* sp. n. Carboniferous, Oklahoma; Girty New York N.Y. Ann. Acad. Sci. 21 p. 120.

Gaudryina triangularis p. 65 fig. 104, *convexa* p. 66 fig. 105, *paupercula* p. 66 fig. 106, spp. n., *bradyi* p. 67 fig. 107, *apicularis* p. 69 fig. 110, *pseudofliformis* p. 70 fig. 111, *flintii* p. 63 fig. 102, nomm. n., North Pacific; CUSHMAN Bull. U. S. Nation. Mus. 71.

Haliphysema esp. *tumanowiczii*, account of structure and life-cycle, with remarks on *Gastrophysema*;

SCHÉPOTIEFF Zool. Jahrb. Abth. Anat. 32 pp. 43–76 pls. iv & v.

†*Haplophragmium andraei* sp. n. Mittelecân, Norddalmatien; LIEBUS SitzBer. Ak. Wiss. Wien Abth. 1 120 p. 940 text-fig. 5.

Homotrema gen. n. for *Polytrema rubra* (Lamek.), diagnosed, distinctions from *Polytrema*, occurrence; HICKSON Trans. Linn. Soc. Zool. 14 pp. 445 450–460 pls. xxx–xxxii p.p.

Hormosina semiglobosa sp. n. Adriatic (Istrian coast); WIESNER Zool. Anz. 38 p. 509 2 figs.

Lagena juddiana sp. n., Funafuti, diagnosed; CHAPMAN J. Linn. Soc. Zool. 30 p. 408 pl. liv fig. 7.

†*L. globosa* var. n. *tenuissimestriata* Tertiary, Simimis, Djaul; SCHUBERT Abh. geol. Rchsanst. 20 H. 4 p. 67.—*L. laevigata* var. n. *malcolmsonii*, Boulder Clays, N. Ireland; WRIGHT Belfast Rep. Nat. F. Cl. Ser. II 6 iv (Appendix 1) p. 4 pl. i figs. 1 & 2.—*L. stewartii* sp. n. p. 12 pl. ii fig. 8, Estuarine Clays, Limavady Sta.; WRIGHT T.c. (Appendix No. 2).—*L. striata* d'Orb. var. n. *alata* Eocene, Norddalmatien; LIEBUS SitzBer. Ak. Wiss. Wien Abth. 1 120 p. 908 pl. i fig. 1.—*L.* spp., from different horizons, Italy, comparative note; FERNASINI Rend. Acc. sc. Bologna N.S. 14 pp. 65–70 1 pl.

†*Lepidocyclina gemellaroi* sp. n. Tertiary, Bagheria; CHECCHIA-RISPOLI Giorn. sc. nat. econ. 28 p. 160 pl. vi figs. 39–53.—*L. inermis* p. 72 pl. D. fig. 5, *smithi* p. 73 fig. 8, spp. n., Tertiary, Philippine Is.; DOUVILLÉ Philippine J. Sci. D. 6.—*L. sclerotisans* Suralil-Hiratom p. 117 pl. ii figs. 2 & 3 & text-fig. 16, *epigona* Kapsu p. 118 pl. v fig. 2, spp. n., Tertiary; SCHUBERT Abh. geol. Rchsanst. 20 H. 4.—*Lepidocyclinae* and *Orbitoideae*, remarks on systematic and affinities pp. 103–139, *L. dilatata* pp. 139–156 pl. i figs. 2–10, *tournoueri* pp. 157–163 figs. 11 & 12, descriptive notes; SILVESTRI Mem. Acc. Nuovi Lincei 28.

†*Lepidosemicyclina* subgen. n. (*Orbitoides*), characterized; RUTTEN Amsterdam Proc. Sci. Akad. Wet. 13 p. 1135.

†*Linderina brugesii* Schlumb. Eocene, Selsey Bill, redescribed

HERON-ALLEN & EARLAND J. R. Microsc. Soc. 1911 pp. 332-335 pl. xii.

†*Lingulina carinata* var. n. *biloculi*, Estuarine Clays, Magheramorne and Limavady; WRIGHT Belfast Rep. Nat. F. Cl. Ser. II 6 iv (Appendix No. 2) p. 13 pl. ii fig. 10.

†*Marginulina fissicostata* (Gümb.), Pliocene, Farnesina, description; SILVESTRI Atti Acc. Nuovi Lincei 64 pp. 177-183 1 text-fig.

Miliolina compressa sp. n., *M. seminum* var. n. *anguste-oralis*, *M. peregrina* var. n. *striata*, *M. milletti* nom. nov. varr. nn. *carinata*, *striata*, *M. terquemiana* nom. nov. (in all cases names only—no diagnoses whatever!); WIESNER Zool. Anz. 38 pp. 506 & 507.

†*Miogypsina burdigalensis* Gümb. var. n. *suralilensis*, Tertiary; SCHUBERT Abh. geol. Reichsanst. 20 H. 4 p. 120 pl. iii fig. 2.—*M. irregularis* var. n. *orientalis*, Tertiary, Philippine Is.; DOUVILLÉ Philippine J. Sci. D. 6 p. 74 pl. D figs. 9-10.

†*Nodosinella clarkei* sp. n. Carbonic, Magdalen Is.; BEEDE N. Y. St. Mus. Bull. No. 149 p. 175 3 figs.

†*Nonionina quadriloculata* sp. n., Selsey Bill; HERON-ALLEN & EARLAND J. R. Microsc. Soc. 1911 p. 342 pl. xi figs. 12-15.

†*Nubeculariella* gen. n. (resembling *Nubecularia*) *birulai* sp. n., Siberian Polar Sea; AWERINZEW Mem. Ac. Sci. St. Petersburg Ser. 8 29 3 p. 8 fig. 3.

†*Nummulites bayhاريensis* sp. n. p. 131 pl. iv figs. 9-11, *N. gentilei* Prev. var. n. *regularis* p. 132 fig. 41, *N. tchihatcheffi* d'Arch. var. n. *apiculata* p. 136 fig. 39, Eocene, Bagheria; CHECCHIA-RISPOLI Giorn. sc. nat. econ. 28.—*N. (Bruquieria) uhligi* p. 177 pl. vii fig. 4, *N. (Paronaea) pillai* p. 180 figs. 2 & 3, *tondii* p. 181 fig. 10, spp. n., Eocene, Bagheria; CHECCHIA-RISPOLI T.c.—*N. subniasi* sp. n. Tertiary, Philippine Is.; DOUVILLÉ Philippine J. Sci. D. 6 p. 58 pl. A fig. 1.

†*Nummulitidae*, Eocene, Bagheria (Palermo), characterized; CHECCHIA-RISPOLI Giorn. sc. nat. Palermo 28 pp. 121-200 pls. i-vii.

†*Operculina costata* var. n. *tuberculata*, Tertiary, Philippine Is.; DOUVILLÉ Philippine J. Sci. D. 6 p. 56 pl. A fig. 4.

†*Orbitoides (Lepidocyclina) acuta* p. 1130 text-fig. 2, *flexuosa* p. 1132 fig. 3, *polygona* p. 1133 *glabra* p. 1137, fig. 4, spp. n., *sumatrensis* Brady var. n. *minor* p. 1136, *neodispana* Jones & Chapman var. n. *minor* p. 1136, *O. (Lepidosemicyclina) thecideaeformis* p. 1135, *polymorpha* p. 1137, spp. n., Post-Eocene, Borneo; RUTTEN Amsterdam Proc. Sci. Akad. Wet. 13.

†*Orthophragmina triangularis* sp. n. Eocene, Bagheria; CHECCHIA-RISPOLI Giorn. sc. nat. econ. 28 p. 168 pl. v figs. 13-41.

Pelosina (?) *arctica* sp. n. Siberian Polar Sea; AWERINZEW Mem. Ac. Sci. St. Petersburg Ser. 8 29 3 p. 7 figs. 7 & 8.

Pleurostomella spinosa sp. n. North Pacific; CUSHMAN Bull. U. S. Nation. Mus. 71 p. 51 figs. 83-84.

†*P. sapperi* sp. n. Tertiary, Fetsoa Neu Mecklenburg; SCHUBERT Abh. Geol. Reichsanst. 20 Hft. 4 p. 56 text-fig. 3.

†*Pleurostomellina* nom. n. for *Pleurostomella subnodosa* Reuss and other forms; SCHUBERT T.c. p. 59.

Polymorphina dubia sp. n., Siberian Polar Sea; AWERINZEW Mem. Ac. Sci. St. Petersburg Ser. 8 29 3 p. 19 fig. 4.

Polytrema minaceum, account of minute shell-structure, distribution and distinction from allied genera (*Homotrema*, *Sporadotrema*); HICKSON Trans. Linn. Soc. Zool. 14 pp. 444-450-460 pls. xxx-xxxii *pro parte*.

Pulvinulina haliotideia sp. n., North Sea; HERON-ALLEN & EARLAND J. R. Microsc. Soc. 1911 p. 338 pl. xi figs. 6-11.

†*Sagrina raphanus* varr. n. *semi-striata* Sainabas p. 89 text-fig. 10, *nodosaroides* Insel Maria, Tertiary p. 88 figs. 8 & 9; SCHUBERT Abh. geol. Reichsanst. 20 H. 4.

†*Sporadotrema* gen. n. for *Polytrema cylindricum* Carter; HICKSON Trans. Linn. Soc. Zool. 14 p. 447.

specific disease; GILRUTH, SWEET & DODD *Parasitol.* **4** pp. 1-6 pl. i.

Haemogregarina seurati **sp. n.**, occurrence and note; LAVERAN & PETTIT *C. R. Soc. Biol.* **50** pp. 95 & 96.—*H. imperatoris* [**sp. n.**], occurrence and account of different forms; SEIDELIN *Ann. trop. Med. Parasitol.* **5** pp. 374-377 pl. xv.—*H. schenii* **sp. n.** from *Rana tigrina*, note; MATHIS & LÉGER *Bull. Soc. Path. exot.* **4** p. 449.—*H. sternothaeri* **sp. n.** and *H. sp.* (possibly *H. varani* Lav.), notes and occurrence; FRANÇA *Arch. R. Inst. Bact.* **3** pp. 202-205 2 text-figs.—*H. s.*, division-forms, p. 237 pl. vi figs. 19 & 22, *H. pestanae* **sp. n.**, occurrence and note, p. 229 figs. 1 & 2; FRANÇA *T.C.*—*H.* [or *Karyolysus*] *tupinambis*, from a lizard, regarded as showing binucleate condition; CARINI *Centralbl. Bakt. Abt. 1* **61** *Orig.* pp. 542-544 5 text-figs.—*H. sp.* from *Rana tigrina*, with peculiar enveloping capsule; SCHEIN *C. R. soc. biol.* **70** pp. 1000-1002 15 text-figs.

Haemogregarines of *Clemmys leprosa* in Portugal, different forms and comparison with *H. bagensis* Ducloux; FRANÇA *Arch. R. Inst. Bact.* **3** pp. 239-243 5 text-figs.—Haemogregarines from Reptiles and Batrachians, notes on; MATHIS & LÉGER *Bul. soc. path. exot.* **4** pp. 446-451.—Haemogregarines of various Reptiles and Amphibia, Tonkin, descriptive notes; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911 pp. 319-330 pls. vii & viii.—[Haemogregarines in white corpuscles of birds and mammals, see under *Hepatozoon*.]

Hepatozoon (Haemogregarina) canis, occurrence in Italy and note on; BASILE *Rend. Acc. Lincei Ser. 5* **20** ii pp. 730-733 7 text-figs.—*H. canis*, account of schizogonic and sporogonic phases; WENYON *Parasitol.* **4** pp. 324-332 pl. xvi.—*H. muris*, description of schizogonic multiplication, comparison with other species; FRANÇA & PINTO *Arch. R. Inst. Bact.* **3** pp. 207-217 pls. iv & v.—*H. canis-adusti*, weisse Blutkörperchen des Schakals, Beschreibung, Fortpflanzung (Russ.); YAKIMOFF u. KOHL-YAKIMOVA *Rév. vétérin. Moskva* **13** 1911 pp. 289-294 1 pl.—*H. (Haemogregarinae) leucocytes*, *atticorae* p. 60 figs. 13-28, *rhamphocoei* p. 61 figs. 29-34, *poroariae* p. 61 figs.

35-37, *sporophilae* p. 62 figs. 38-58, *tanagrae* p. 62 figs. 60-63, *sicalidis* p. 63 figs. 64-74, *brachyspizae* p. 63 figs. 75-79, **spp. n.**, from various birds, described; ARAGAO *Mem. Inst. Oswaldo Cruz* **3**.

Halteridium noctuae, living observations and notes on infections; absence of any trypaniform phase; MINCHIN & WOODCOCK *Q. J. Microsc. Sci.* **57** pp. 144-166.—*H. noctuae* and *Leucocytozoon ziemanni*, further remarks and observations bearing on their connection with Trypanosomes; SCHAUDINN (the late) & OTHERS in "Fritz Schaudinn's Arbeiten" 1911 pp. 575-586 pls. xxviii & xxix.—*H. syrnii* **sp. n.** from *Syrnium aluco*, ookineteformation in mosquitoes; MAYER *Arch. Protistenk.* **21** pp. 232-254 pls. xxii & xxiii.—*H. spp.*, from various birds, Tonkin, notes on form and size; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911 pp. 265-272 pl. iii.—*H. spp.*, cytoplasmic fusion of growing gametocytes; WOODCOCK *Zool. Anz.* **38** pp. 465-471 22 text-figs.—*H. sp.*, from *Dacelogigae*, Australia, note on morphology; WELSH & PRIESTLEY *Journ. Path. Bact.* **15** pp. 369 & 370 pl. xliii fig. 2.

Laverania malariae (praecox), research on production, life and death of crescents (gametocytes); THOMSON *Ann. trop. Med. parasitol.* **5** pp. 57-82 charts.

Leucocytozoon audieri **sp. n.** from an eagle, notes on; LAVERAN & NATHAN-LARRIER *C. R. Soc. Biol.* **70** pp. 686-688 6 text-figs.—*L. kerandeli* [probably syn. *L. mesnili*] p. 282 pl. iv figs. 9-11, *dubreuili* p. 318 pl. vi figs. 9-13, **spp. n.**, *caulleryi* (and *sabrazesi*, regarded as distinct) pp. 286-307 pl. v, described, *martini* p. 308 pl. vi figs. 28-32, *marcouxi* p. 309 figs. 14-16, *leboeufi* p. 311 figs. 23-27, *simondi* p. 312 figs. 17 & 18, *brimonti* p. 314 figs. 19-22, *roubaudi* p. 316 figs. 33-37, occurrence and further description; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911.—*L. martini*, *leboeufi* and *roubaudi*, **spp. n.**, occurrence and notes; MATHIS & LÉGER *C. R. Soc. Biol.* **70** pp. 211 & 212.—*L. ziemanni*, living observations and notes on infections, absence of any motile trypaniform phase; MIN-

CHIN & WOODCOCK Q. J. Microsc. Sci. 57 pp. 144-166.—*L. ziemanni* [and probably other spp.], notes on; CARDAMATIS Centralbl. Bakt. Abt. 1 60 Orig. pp. 241-245 2 pls.—*L. sp.* [*ziemanni*?] from *Syrnium aluco*, ookinete-formation in mosquitoes; MAYER Arch. Protistenkunde 21 pp. 232-254 pls. xxii & xxiii.—*L. spp.* of birds (including *L. toddi*), from French Congo, notes; AUBERT & HECKENROTH C. R. soc. biol. 70 pp. 958 & 959.

Microsoma gen. n. mustelae sp. n., regarded as allied to the *Piroplasmata*, occurrence and description; LEBEDEFF & TSCHARNOTZKY Centralbl. Bakt. Abt. 1 58 Orig. pp. 625-631 1 pl.

Paraplasma gen. n. (allied to the *Piroplasmata*), *flavigenum sp. n.*, regarded as cause of yellow-fever, described; SEIDELIN Bull. Yellow fever Bureau 1 pp. 241-251 pl. i.—Another account of the same bodies (not named); ID. J. Path. Bact. 15 pp. 282-288 pls. xxix & xxx.

Piroplasma weissii sp. n., occurrence and note; GALLI-VALERIO Centralbl. Bakt. Abt. 1 58 Orig. pp. 565-567 1 text-fig.—*P. spp.* of cattle, notes on; CARDAMATIS Centralbl. Bakt. Abt. 1 60 Orig. pp. 514-518 1 pl.

Plasmodium inui from *Macacus spp.*, life-cycle described; MATHIS & LÉGER Ann. Inst. Pasteur 22 pp. 593-600 pl. i. Also in "Recherches de parasitologie" etc. 1911 pp. 257-264 pl. ii.

Theileria parva, account of gametogony, copulation and ookinete-formation; GONDER Arch. Protistenkunde 22 pp. 170-178 pls. x & xi.—*T. parva*, description of the multiplicative phases known as Koch's "Plasmakugeln" or "blue bodies"; MEYER Centralbl. Bakt. Abt. 1 57 Orig. pp. 415-432 3 pls.—*T. parva* u. *Piroplasma mutans*, Küstenfieberparasit und Pseudoküstenfieberparasit (vergleichende Studie); GONDER Arch. Protistenkunde 21 pp. 222-231 Taf. xviii-xxi.

(d) Myxosporidia.

Chloromyxum leydigi, observation of early stages in the development of the young individual from the spore; ERDMANN Arch. Protistenkunde 24 pp. 149-162 pls. xii-xiv.

(N-9186 e)

Glugea anomala, constitution of the cyst and notes on development of sporonts and spores; AWERINZEW & FERMOR Arch. Protistenkunde 23 pp. 1-6 7 text-figs.—*G. lophii*, a true *Nosema* (q. v.), *G. anomala* and *G. hertwigii sp. n.* (diagnosed p. 348), structure of true cysts and nuclear processes in development of spores; WEISSENBERG SitzBer. Ges. natf. Freunde 1911 pp. 344-351.—*G. polymorpha sp. n.* parasite of *Simulium*-larvae, effects on host and note on spores; STRICKLAND Biol. Bull. 21 pp. 318-328 pls. iv & v.

Gurleya legeri Hesse, from caddis-fly larvae, notes; MACKINNON Parasitol. 4 p. 34 pl. iii figs. 13 & 14.—*G. richardi sp. n.*, occurrence and note on spores; CÉPÈDE Ann. biol. lacustre 5 pp. 29-32 text-figs. 4-13.

Henneguya, key of known species and their occurrence, p. 166, *gigantea sp. n.* in *Lucioperca sandra*, described, pp. 146-153 pls. viii & ix; NEMECZEK Arch. Protistenk. 22.

Lentospora encephalica sp. n. from carp, described; MÜLSOW Allg. Fische-reiztg. 36 pp. 483-485.

Myxidium sp., details of the spore-development; AWERINZEW Arch. Protistenk. 23 pp. 199-204 7 text-figs.

Myxobolus ellipsoides, sviluppo; LOGIUDICE Riv. mens. Pesca 6 (13) pp. 217-225 9 figs.—*Myxobolus minutus* in *Leuciscus leuciscus* p. 160 text-figs. 16 & 17, *M. rotundus sp. n.* in *Abramis brama* p. 157 textfigs. 10 & 11; NEMECZEK Arch. Protistenk. 22.

Myxosoma lobatum sp. n. in *Leuciscus*; NEMECZEK T.c. p. 161 text-fig. 18.

Nosema branchiale sp. n. in *Gadus aeglefinus*, diagnosed; NEMECZEK T.c. pp. 163 & 164 text-fig. 19.—*N. bryozoïdes* in Hodenzellen von *Plumatella repens*, Beschreibung; BRAEM St. Petersburg Trav. Soc. nat. Sect. zool. 42 2 1-ère partie pp. 19-29 text-figs. 11-17.—*N. (Glugea) lophii*, full account of cell-parasitism, distinctions from *Glugea*, relations to host's nervous tissue and phases in life-cycle; WEISSENBERG SitzBer. Ges. Natf. Freunde 1911 pp. 149-157 and Arch. Mikr. Anat. 78 pp. 383-421 pls. xviii & xix.

a 7—3

Octosporea gen. n. [regarded as a Schizogregarine, but really a Microsporidian and most probably syn. *Thelohania*] *muscae-domesticae*, occurrence and notes on sporogony; FLU Centralbl. Bakt. Abth. 1 57 Orig. pp. 530-533 1 pl. (p. p.).—*O. muscae-domesticae* Flu, a true Microsporidian, occurrence and life-cycle, *O. monospora* sp. n., diagnosis and comparison; CHATTON & KREMPE Bul. soc. zool. 36 pp. 172-179 2 text-figs.

Paramyxa gen. n., *paradoxa* sp. n., life-cycle and peculiar character of spore; CHATTON C. R. Acad. Sci. 152 pp. 631-633 10 text-figs.

Pleistophora labrorum sp. n., from *Crenilabrus melops*, note; LE DANOIS Bul. soc. sci. méd. Rennes 19 pp. 210 & 211 1 fig.—*P. periplanetae* (Lutz & Splendore), Sporenbildung und feinere Struktur; ERSTEIN Biol. Centralbl. 31 pp. 676-682.—“*P. gigantea*” Thél., account of a parasite from *Crenilabrus* regarded as this form [this does not appear to be a true *Pleistophora*, for no polar capsule was observed]; SWELLENGREBEL Parasitol. 4 pp. 345-363 pls. xvii & xviii & 20 text-figs.

Thelohania vide also *Octosporea*.

(e) Sarcosporidia.

Sarcocystis rileyi (Stiles), minute structure of spores described; CRAWLEY Proc. Acad. Nat. Sci. Philadelphia 63 pp. 457-468 pl. xxxvi.—*S. tenella*, division of spore into sporozoites in old cysts; REICHMANN Arch. Protistenkunde 22 pp. 239-247 pl. xv.—*S. tenella*, notes on cyst-“envelope,” minute structure of the spore; ALEXEIEFF C. R. soc. biol. 71 pp. 397-399.

(f) Haplosporidia.

Anurosporidium pelsenceri Caull. et Chap., life-cycle and affinities; CÉPÈDE C. R. Acad. sci. 153 pp. 507-509.

Ichthyosporidium, the cause of “Taufelkrankheit” of trout and other fish, characters in favour of the vegetal nature of this form; PETTIT C. R. soc. biol. 70 pp. 1045-1047.

INCERTAE SEDIS.

[Various and doubtful.]

Chlamydozoa: general account; PROWAZEK & LIPSCHÜTZ In: “Handbuch der pathogenen Protozoen” Lfg 2 pp. 119-121.

A parasite of the intestinal wall of *Cyclops* and *Daphnia*, regarded as a Monocystid Gregarine [much more probably akin to the parasitic Dinoflagellates such as *Blastodinium*]; GRANDORI & GRANDORI Monit. zool. ital. 22 pp. 287-292 1 text-fig.

“Kurloff’s bodies” of guinea-pigs in many respects resemble Chlamydozoan inclusions; SCHILLING Centralbl. Bakt. Abth. 1 58 Orig. pp. 318-325 2 pls.

“Molluscum contagiosum” bodies, formation and minute structure of “elementary corpuscles,” question of their nature, whether parasitic or not; MARLANI Arch. Protistenk. 21 pp. 213-221 pls. xvi & xvii.

Caryoryctes cytoryctoides Calkins in *Paramoecium caudatum* pp. 164-166 pl. xx; CALKINS J. Med. Res. 11 (N. Ser. 6).

“*Cytorrhyctes*” *luis* of Siegel, formerly regarded as a Protozoan organism now considered to be Bacterial, a *Coccus*-form; SIEGEL Centralbl. Bakt. Abth. 1 57 Orig. pp. 68-81 1 pl.—*C. vaccinae* (Guarnieri’s bodies) also regarded as Coccal in nature; SIEGEL Centralbl. Bakt. Abth. 1 59 Orig. pp. 406-415 2 pls.—*Cytoryctes variolae* of small-pox, notes on minute “ultimate granules”; CASAGRANDE Centralbl. Bakt. Abth. 1 57 Orig. pp. 402-415 4 text-figs.—*C. variolae* methods pp. 140-143, life-cycle pp. 143-157 pls. xvi-xix figs. 1 & 2, biology pp. 158-167; CALKINS J. Med. Res. 11 (N. Ser. 6).

Lymphocystis johnstonei. Woodc., cytological changes and developments during growth; AWERINZEW Arch. Protistenkunde 22 pp. 179-196 pl. xii.

Neuroryctes hydrophobiae, the parasite of hydrophobia regarded as indirectly related to *Plasmodiophora* and more allied to Haplosporidia than to Mycetozoa; POLLACCI Rend. Acc. Lincei Ser. 5 20 ii pp. 218-222.

4. MASTIGOPHORA.

(a) Flagellata.

Notes on various intestinal Flagellates (of Amphibia); ALEXEIEFF Arch. Zool. exp. (sér. 5) 6 pp. 491-504 text-figs. 1-8.—Notes on certain Flagellates (*Bodo* spp., *Cercomonas* spp. *Chilomonas*) appearing commonly in infusions; ALEXEIEFF T.c. pp. 504-525 text-figs. 9-15.

Flagellates of house-flies described: "*Herpetomonas*" *muscae-domesticae* and trypanosome-forms, probably both connected with a *Leptomonas*; WENYON Parasitol. 4 pp. 332-338 text-figs. 9-36.

Intestinal Flagellates (*Trichomonas*, *Lamblia*), as pathogenic Protozoa, general account; RODENWALDT in "Handbuch der pathogenen Protozoen" Lfg 1 pp. 78-97 pl. iii & 9 text-figs.

Flagellate parasites of uncertain position, two types described, from *Isochaeta*; POINTNER Zs. wiss. Zool. 98 p. 668 pl. xxix fig. 32.

Flagellate (cf. *Monas pyrophila* Grimm), from a buffalo, notes; PERNARU C. R. soc. biol. 70 pp. 624-625.

Zwei braune Flagellaten; PASCHER Ber. D. bot. Ges. 29 pp. 190-192.

Protozoi diflagellati epiglobulari e corpi di Kurloff-Demel; PATELLA Atti Acc. fisio-critici (Ser. IV) 19 pp. 172-222 20 figs.

Astasia captiva sp. n., parasitic in a Turbellarian, described; DE BEAUCHAMP Arch. Zool. exp. (sér. 5) 6 N. et R. pp. lii-lviii 2 figs.

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which is removed from the *Bodonidae*, and *Rhizomonastix*; ALEXEIEFF C. R. soc. biol. 71 pp. 506-508 6 text-figs.

Cercoplasma gen. n. (*Leptomonadinae*) points of distinction from *Leptomonas*, *C. caulleryi* sp. n., occurrence and different forms; ROUBAUD C. R. soc. biol. 71 pp. 502-505 26 text-figs.

Chilomastix gallinarum sp. n., observations on; MARTIN & ROBERTSON Q. J. Microsc. Sci. 57 pp. 62-65 figs. 1-10.—[*Chilomastix*, vide Addendum, end of Systematic.]

Chromulina spectabilis p. 324 figs. 28-33, *obconica* p. 338 fig. 48, spp. n.; SCHERFFEL Arch. Protistenk. 22.

Chrysmonadinae, morphological notes on; SCHERFFEL Arch. Protistenkunde 22 pp. 298-344 pl. xvi.

Chrysopyxis stenostoma, pseudopodia instead of flagella, comparison with *Chrysamoeba*; LAUTERBORN Zool. Anz. 38 pp. 46-51 1 fig.

Chrysostephanosphaera gen. n. (near *Chrysamoeba*), *globulifera* sp. n. Austria; SCHERFFEL Arch. Protistenk. 22 pp. 307-313 figs. 17-21.

Costia necatrix (Henneguy), general account; NERESHEIMER [In: Handbuch der pathogenen Protozoen, hrsg. v. S. v. Prowazek Lfg 1 pp. 98-100 4 figs.

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the individuality of these forms or their connection with Trypanosomes; PORTER Parasitol. 4 pp. 22-23 & 154-163, and WOODCOCK T.c. pp. 150-153.

Cryptomonas marina sp. n. Kiel harbour; BÜTTNER Wiss. Meeresunters. Abth. Kiel N.F. 12 p. 129 text-fig. 8.

Cyanomonas gen. n. (near *Rhodomonas*), *baltica* sp. n., Kiel harbour; BÜTTNER T.c. p. 129 text-fig. 9.

Cyathomonas From., Stellung im System; ULEHLA Ber. D. bot. Ges. 29 pp. 284-292.

Cyrtophora gen. n. (*Chrysomonadineae*) *pedicellata* sp. n., Franzensbad, described, relationships; PASCHER Ber. D. bot. Ges. 29 pp. 112-125 1 pl.

Cystotrypanosoma subgen. n. (*Trypanosoma*) p. 308, for *intestinalis* sp. n. from *Lucilia*, with formation of cysts; ROUBAUD C. R. Soc. Biol. 71 pp. 306-308 27 text-figs.

Embadomonas gen. n. (Monadina) *agilis* sp. n. from Trichopterous larvae, described; MACKINNON Parasitol. 4 p. 30 pl. iii figs. 1-3 & text-fig. 1.

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Fanaepea gen. n. *intestinalis* sp. n., occurrence and descriptive note; PROWAZEK Arch. Protistenk. 23 pp. 99 & 100 text-figs. 9-16.

Helcomastix globosa Senn, occurrence and description; SENN Zs. wiss. Zool. 97 pp. 648-649 pl. xxxi fig. 28.

Herpetomonas aspongopi described; ADERS Rep. Wellcome Res. Lab. 4 Vol. B (General Science) pp. 202-205 text-fig. 37.—*H. calliphorae* and *lineata* spp. n., occurrence and description; SWINGLE J. inf. diseases 8 pp. 137-146 pls. iii & iv.—“*H.*” *pattoni* sp. n. [probably a phase of *T. lewisi*] in the rat-flea, note on; ID. T.c. pp. 134-137 pls. ii & iii.—*H. calliphorae* Swingle (“biflagellate” form), life-history, degenerative changes; SWELLENGREBEL Parasitol. 4 p. 112 text-figs. 3-12 [Cf. *Leptomonas* (*Crithidia*) *calliphorae*.]

—*H. luciliae* sp. n., biology and life-cycle; STRICKLAND Parasitol. 4 pp. 222-236 pls. viii & ix.—*H. lygaei*, described; ARCHIBALD Rep. Wellcome Res. Lab. 4 Vol. A (Med.) pp. 179-184 pl. xi.—*Herpetomonas* (type *H. muscae-domesticae* according to Prowazek) and *Leptomonas* (e.g. *L. drosophilae*) formerly regarded as quite distinct, now admitted to be not so separate; only a quantitative distinction between the two; *H. m.-d.* not really biflagellate; CHATTON C. R. soc. biol. 71 pp. 578-580.—“*H.*” *pattoni* not regarded as a distinct, independent form; more probably a phase of *T. lewisi*; SWELLENGREBEL & STRICKLAND Parasitol. 4 pp. 104-107.—[*H.* see under *Leptomonas*.]

Heteromita see under *Bodo*.

Heteronema klebsii Senn, described; SENN Zs. wiss. Zool. 97 pp. 649-652 pl. xxxi figs. 29-31.

Holomastigotoides gen. n. [*Lophomonadidae*?] for “males” of *Trichonympha kertwigi* Hartmann; GRASSI & FOA Rend. Acc. Lincei Ser. 5 20 i p. 729.

Leishmania tropica, in Bagdad occurrence, question of transmission, developmental forms; WENYON Parasitol. 4 pp. 273-318 pls. xii-xiv.—*L.* of Kala-Azar in Italy, notes on morphology and mode of transmission; BASILE Rend. Acc. Lincei Ser. 5 20 i pp. 278-282 479-485 & 955-959 1 pl.—*L.*, canine and human of Italy, identity of; BASILE LA CAVA & VISENTINI Rend. Acc. Lincei Ser. 5 20 ii pp. 150-154 1 pl.—*L.* sp., of non-ulcerating Oriental Sore, cultural characters of the parasites, and comparison with similar Flagellates in a Pentatomid bug; CARTER Ann. trop. Med. Parasitol. 5 pp. 15-35 pls. iii & iv.—“*Leishmania canis*” [the author is apparently mixing up *Piroplasma canis* and *Leishmania infantum*] notes on; CARDAMATIS Centralbl. Bakt. Abth. 1 60 Orig. pp. 518-523 pl. ii.

Lepochromulina gen. n. (*Chrysomonadinae*) p. 318, *bursa* p. 319 fig. 25, *calyx* p. 320 figs. 26 & 27, spp. n.; SCHERFFEL Arch. Protistenk. 22.

Leptomonas davidi Lafont, occurrence and different forms described; FRANCA Bull. Soc. Path. exot. 4 pp. 532-

534 & 669-571.—*L. d.* from *Euphorbia pilulifera*, notes on; transmission by a Hemipteran; BOUET & ROUBAUD C. R. Soc. Biol. **70** pp. 55-57 12 text-figs.—*L. d.*, observations; LAFONT Bul. soc. path. exot. **4** pp. 464-467.—*L. drosophilae*, different phases described, leptotrypanosome form compared with *T. drosophilae*; CHATTON & LÉGER C. R. Soc. Biol. **70** pp. 34-36 text-figs.—*L. drosophilae*, structure and significance of axoplast, comparison with axostyle of Trichomonads; CHATTON & LÉGER op. cit. **71** pp. 575-578 6 text-figs.—*L. muscae-domesticae*, morphology of different forms, encystment stages, the question of its relationship to "*Herpetomonas*" *m.-d.*; DUNKERLY Q. J. Microsc. Sci. **56** pp. 645-655 pl. xxxi.—*L. m.-d.* and [or] *H. m.-d.*, different forms described; FLU Centralbl. Bakt. Abt. 1 **57** Originale pp. 522-530 2 pls.—*L. (H.) m.-d.*, cytological details, synonymy; ALEXEIEFF C. R. soc. biol. **71** pp. 379-380 text-figs.—*L. rubrostriatae*, *ampelophilae*, spp. n., occurrence and specific distinctions from *drosophilae*; CHATTON & LÉGER T.c. pp. 663-666.—*L. soudanensis* sp. n. from *Pycnosoma*, characters regarded as distinguishing it from other forms in same hosts; ROUBAUD T.c. pp. 570-573 46 text-figs.—*L.* spp. different forms and phases from various spp. of *Drosophila* compared; CHATTON & LÉGER C. R. soc. biol. **70** pp. 120-122 text-figs.—*L. (H.)* spp. further diagnoses and comparisons, the question of the *Leptomonas*-*Herpetomonas* synonymy; ALEXEIEFF op. cit. **71** pp. 455-458 17 text-figs.

✓ *Mesojoenia* gen. n. [*Lophomonadidae*?], *decipiens* sp. n., occurrence and diagnosis; GRASSI & FOA Rend. Acc. Lincei Ser. 5 **20** i p. 728.

✓ *Microrhopalodina* gen. n. (*Calonymphidae*) *enflata* [sp. n. ?], diagnosis; GRASSI & FOA T.c. p. 730.

Monas vulgaris, position dans la systématique des Flagellés, division nucléaire, signification du blépharoplaste; ALEXEIEFF Bul. soc. zool. **36** pp. 96-103 1 text-fig.

Monocercomonas cetoniae sp. n., habitat and description; JOLLOS Arch. Protistenk. **23** pp. 311-317 pl. xiii.

Nephroselmis olivacea Stein, described; SENN Zs. wiss. Zool. **97** pp. 643-647 pl. xxxi figs. 25-27.

Ochromonas olivacea sp. n., Kiel harbour; BÜTTNER Wiss. Meeresunters. Abth. Kiel N.F. **12** p. 124 text-fig. 2.

Oicomonas ocellata sp. n. occurrence and diagnosis; SCHERFFEL Arch. Protistenk. **22** p. 329 figs. 41 & 42.

Oxyrrhis marina Duj., detailed account of, relationships rather with *Gymnodinaceae* (*Hemidinium*), than with Euflagellates; SENN Zs. wiss. Zool. **97** pp. 606-643 pl. xxx.

✓ *Parajoenia* gen. n. (*Trichonymphidae*), *grassii* sp. n., from *Calotermes*, account of parabasal apparatus and locomotor organellae; JANICKI Biol. Centralbl. **31** p. 324 text-fig. 3.

Phacomonas pelagica, descriptive note; PASCHER Ber. D. bot. Ges. **29** pp. 517-523 1 pl.

Phaeococcus marinus sp. n.; REINISCH Ber. D. bot. Ges. **29** pp. 77-83 1 pl.

Phaeocystis sphaeroides, *amoeboides* spp. n., Kiel harbour; BÜTTNER Wiss. Meeresunters. Abth. Kiel N.F. **12** p. 125 text-figs. 3 & 4.

Pleodorina californica, Banyuls-sur-Mer, son cycle évolutif et sa signification phylogénique; CHATTON Bul. sci. France-Belgique **44** pp. 309-331 pl. vii.

Polymastix batrachorum sp. n. from Triton, diagnosed; ALEXEIEFF Arch. Zool. exp. (Sér. 5) **6** p. 495 text-fig. 3.

✓ *Protrichomonas* gen. n., for *Trichomonas legeri* Alex.; ALEXEIEFF C. R. soc. biol. **71** p. 540.

Prowazekia, as a genus, distinguished from *Bodo* by the presence of a kinetonucleus; HARTMANN Arch. Protistenk. **23** p. 143.—*P. weinbergi*, notes on; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911 pp. 199-205 text-figs.

✓ *Pseudotriconympha* gen. n., for "female forms" of *Trichonympha* according to Hartmann; GRASSI & FOA Rend. Acc. Lincei Ser. 5 **20** i p. 729.

✓ *Rhizomastix* gen. n. (*Cercomonadina*) *gracilis* sp. n., a new uniflagellate parasite with a "rhizostyle";

ALEXEIEFF Arch. Zool. exp. (sér. 5) 6 p. 502 text-fig. 8.

Rhynchoidomonas (for *Rhynchomonas*, Patton) *luciliae*, cytological details, synonymy; ALEXEIEFF C. R. Soc. Biol. 71 pp. 380-382 text-figs.—*R. l.* only a phase of *Leptomonas* (*Herpetomonas*) *m.-d.*; ALEXEIEFF T.c. p. 458.

Scherffelia gen. n. for *Carteria dubia* Scherff. = *Cryptomonas d.* Perty, Bohemia, characterized; PASCHER LOTOS 59 pp. 341 & 342 2 text-figs.

Schizotrypanum cruzi, notes on habitat and schizogony; CHAGAS Bull. Soc. Path. exot. 4 pp. 467-471.—[S. see also under *Trypanosoma*.]

Stephanonympha gen. n. (near *Calonympha*), *silvestrii* sp. n. from *Calotermes*, cytology with special reference to parabasal apparatus; JANICKI Biol. Centralbl. 31 p. 325 text-figs. 4 & 5.

Trichomastix gallinarum sp. n., characteristics and observations on; MARTIN & ROBERTSON Q. J. Microsc. Sci. 57 pp. 74-78 figs. 53-72.

Trichomonas, diagnosis and characters of the genus, *T. augusta* p. 540, *tritonis parva*, *sanguisugae*, p. 541, spp. n., occurrence and diagnoses; ALEXEIEFF C. R. Soc. Biol. 71.—*T. gallinarum* sp. n. and *T. eberthi* [non sp. nov. but sp. (Kent)], characteristics and observations on; MARTIN & ROBERTSON Q. J. Microsc. Sci. 57 pp. 66-74 figs. 11-52.—*T.* (and *Bodo*) of Batrachians, intestinal cysts (not regarded as of vegetable nature), development described; ALEXEIEFF Bul. sci. France-Belgique 44 pp. 333-355 pl. viii.

Trichonympha minor sp. n.; GRASSI & FOA Rend. Acc. Lincei Ser. 5 20 i p. 729.

Trimastigamoeba, see under *Amoebae*.

Tropidoscyphus cyclostomus Senn, occurrence and description; SENN Zs. wiss. Zool. 97 p. 652 pl. xxxi figs. 32-35.

Trypanoplasma (Laveran und Mesnil), general account; NERESHEIMER In: Handbuch der pathogenen Protozoen hrsg. v. S. v. Prowazek Lfg 1 pp. 101-117 22 text-figs.—*T. clariae* sp. n.; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911 p. 391 pl. xiii figs. 7-11.—*T.* (cf. *cyprini*), trans-

mission of by, and development in, the leech *Hemiclepsis marginata*; ROBERTSON Trans. R. Soc. B 202 pp. 35 & 36 pl. i figs. 1-6.—*T. limnorum* p. 86 text-figs. 1 & 3, *desertorum* p. 85 figs. 2b 8 10, *rupestre* p. 85 figs. 2a & 6, *helicogenae* p. 86 fig. 5, *tacheurum* p. 86 figs. 4 & 7, from various snails, described; KÜHN Schr. physik. Ges. Königsberg 52.

Trypanosoma anguillicola, *bancrofti*, spp. n., from fish described; JOHNSTON & CLELAND Proc. Roy. Soc. N. S. Wales 44 pp. 407-415 figg.—*T. bocagei* França var. n. *parva* and *magna* pp. 957 & 958, *chattoni* sp. n. pp. 1008 & 1009, from Tonkin toad [doubtful how far these are distinct forms]; MATHIS & LÉGER C. R. Soc. Biol. 70.—*Trypanosoma brucei*, Bau und Teilungerscheinungen; KÜHN & SCHUCKMANN Heidelberg SitzBer. Ak. Wiss. math.-natw. Kl. 1911 Abh. 11 pp. 1-21 1 pl.—*T. brucei* (or *pecaudi*?), cultural forms, also peculiar developmental forms [possibly involution-forms] in internal organs, bone-marrow etc. of *Gerbillus*; BUCHANAN Rep. Wellcome Res. Lab. 4 pp. 57-61 pl. ii, and Proc. Roy. Soc. B 84 pp. 161-164 pl. iii.—*T. brucei* sans kinétocoele de Werbitski, notes; LAVERAN Bul. soc. path. exot. 4 pp. 235-239 273-274.—*T. calmettei* from fowl, p. 360 pl. ix figs. 1-4, *T. sp.* from *Ardetta sinensis* (little bittern) [regarded by the authors as *T. calmettei*, but which is much more probably a distinct form] p. 362 figs. 9-11, *T. chouqueti* sp. n. from *A. flavicollis* [probably the same species as the preceding] p. 365 fig. 6; MATHIS & LÉGER "Recherches de parasitologie" 1911.—*T. caprae* Kl. and Taute, notes on morphology; FISCHER Zs. Hyg. 70 pp. 97-102 6 text-figs.—*T. chagasi* sp. n., cytological study of this piscine form; HORTA & MACHADO Mem. Inst. Oswaldo Cruz 3 pp. 336-344 pl. xix.—*T. cazalhoui* ne doit pas être identifié à *T. vivax*; LAVERAN Bul. soc. path. exot. 4 pp. 193-195.—*T.* (*Schizotrypanum*) *cruzi*, phases of life-cycle in *Conorhinus*, schizogony in Man, described; CHAGAS Mem. Inst. Oswaldo Cruz 3 pp. 225-236.—*T. dimorphon* (sensu Lav. & Mesn.), morphology, comparison with *congolense*; JOWETT J. trop. vet. Sci. 6 pp. 169-190 pls. viii-xii.—*T. dimorphon* sens. Lav. & Mesn. and *T.*

vivax, from horses, Gambia, morphological comparison; YORKE & BLACKLOCK Ann. trop. Med. Parasitol. 5 pp. 413-434 pl. xviii.—*T. dimorphon* et *T. congolense*, notes; LAVERAN Bul. soc. path. exot. 3 pp. 518-521.—*T. drosophilae*, an independent eutrypanosome-form quite distinct from the leptotrypanosome-stages (or trypanoids) of *L. drosophilae*; CHATTON & LÉGER C. R. soc. biol. 71 pp. 573-575, also op. cit. 70 pp. 34-36 text-figs.—*T. evansi*, morphology, comparison with *T. brucei*; BRUCE Proc. R. Soc. B 84 pp. 181-187 pl. v.—*T. frobenius* sp. n. similar to *congolense* but regarded as distinct, origin and morphology; WEISSENBORN Arch. Schiffshyg. 15 pp. 477-499 pl. v.—*T. gambiense*, developmental phases in different organs of *Gl. palpalis*; BRUCE, HAMERTON, BATEMAN & MACKIE Proc. R. Soc. B 83 pp. 513-527 80 text-figs.—*T. g.*, developmental phases in *Gl. palpalis* described, pp. 342-348 pls. vi-viii, *T. grayi*, the crocodile-form and developmental phases in *Gl. palpalis*, pp. 350-354 pls. ix & x p. p., *T. caprae* sp. n. from goats p. 371 figs. 43-49, *bovis* sp. n. (perhaps *T. cazalboui*) p. 369 figs. 50-53, morphology; KLEINE & TAUTE Arb. kais. Gesundhtsa. 31.—*T. gambiense* Dutton, morphology of different forms; comparison with those of *T. brucei*; BRUCE Proc. R. Soc. B 84 pp. 327-332 pl. xiii.—*T. g.*, possibility of more than one species or "strain" of human Trypanosome having been included under this name; CASTELLANI J. trop. Med. 14 p. 17.—*T. g.* and *T. rhodesiense*, various phases of life-history as seen in rats and guinea-pigs; formation of latent-bodies; FANTHAM Proc. R. Soc. B 83 pp. 212-227 pl. xv & 2 text-figs.—*T. hippicum* Darl., notes on morphology and possible mode of transmission; DARLING J. inf. diseases 8.—*T. hippicum* Darling, notes; LAVERAN Bul. soc. path. exot. 4 pp. 168-175.—*T. hylae* Fr. & Ath. is syn. *T. rotatorium* p. 672, *T. borreli* characterized and distinguished from *rotatorium* p. 674, from frogs, *T. bocagei* with var. *parva* and *magna* p. 676 and *T. chattoni* p. 678, from toads, distinguished; MATHIS & LÉGER Ann. Inst. Pasteur 25 pls. v & vi.—*T. hypostomi* sp. n. from a Brazilian fish p. 521 text-figs. 1-4; SPLENDORE Bul. Soc. path. exot.

3.—*T. leptodactyli*, phases resembling schizogony; CARINI Arch. Protistenkunde 24 pp. 80-83 2 text-figs.—*T. lewisi*, intracellular stage in development of, in rat-flea; MINCHIN & THOMSON Brit. Med. J. 1911 ii pp. 361-364.—*T. l.*, different phases in rat-fleas described; SWINGLE J. inf. diseases 8 pp. 129-134 pls. i & ii.—*T. l.*, occurrence of characteristic trypaniform phases ("small trypanosomes") in cultures; DELANOE C. R. soc. biol. 70 pp. 704-706.—*T. musculi* sp. n. [syn. *T. duttoni* Thiroux] p. 231; KENDALL J. Infect. Dis. 3.—*T. nanum* Lav. (Uganda), morphological notes and comparison with *T. pecorum*; BRUCE, HAMERTON, BATEMAN & MACKIE Proc. R. Soc. B 83 pp. 180-186 pls. xiii & xiv.—*T. noctuae*, of the little owl, morphology of different forms and their connection (including the form hitherto distinguished as *T. ziemanni*); MINCHIN & WOODCOCK Q. J. Microsc. Sci. 57 pp. 166-182 pls. xx & xxi.—*T. numidae* sp. n. in Hühnern, Java (Holländisch); DE HAAN Geneesk. Tijdschr. Ned. Ind. 51 p. 622.—*T. pecorum* Bruce, notes; LAVERAN Bul. soc. path. exot. 3 pp. 718-721.—*T. perroteti* sp. n. [probably a different form of *T. martini* Bouet] p. 233 pl. vi fig. 15, *bocagei* sp. n. [a form of *T. rotatorium*?], occurrence and note, p. 231 figs. 5 & 6; FRANÇA Arch. R. Inst. Bact. 3.—*T. rhodesiense* Stephens & Fantham, shown to differ in many respects from *T. gambiense* and therefore probably a distinct form; LAVERAN C. R. Acad. sci. 153 pp. 1112-1116.—*T. r.* (or *T. gambiense* var. *rhodesiense*), notes on different forms and dimorphism; SWELLENGERBEL Centralbl. Bakt. Abt. 1 61 Orig. pp. 193-206 9 text-figs.—*T. r.* and *T. gambiense*, question of their common ancestry and present distinction, as well-differentiated varieties; MESNIL & RINGENBACH C. R. soc. biol. 71 pp. 271-273 609-612.—*T. r.*, note on morphology and comparison with *T. gambiense*; STANNUS & YORKE Proc. R. Soc. B 94 pp. 156-160 pl. ii.—*T. rotatorium*, different forms of, from frogs, described; MATHIS & LÉGER "Recherches de parasitologie" etc. 1911 pp. 372-377 pl. x.—*T. bocagei* França var. *magna* and *parva* pp. 378-380 pl. xi figs. 15-17, *chattoni* p. 380 figs. 1-14, described; MATHIS & LÉGER

T.c.—*T. r.*, different forms (distinguished as sexual and asexual), modes of division, including gametogony (multiple fusion), cytological details described; MACHADO Mem. Inst. Oswaldo Cruz 3 pp. 108–135 pls. vii & viii.—*T. rotatorium*, different forms of in Japan, compared; KODZUMI Centralbl. Bakt. Abt. 1 58 Orig. pp. 454–460 1 pl.—*T. roulei* p. 186, *pellegrini* p. 187, **spp. n.**, from fishes, notes; MATHIS & LÉGER C. R. Soc. Biol. 71.—*T. roulei* from *Monopterus javanensis* p. 385 pl. xii figs. 6 & 7, *pellegrini* from *Macropodus viridi-auratus* p. 389 pl. xiii figs. 17 & 18, *T. spp. varr.*, from fishes, pls. xii & xiii, described; MATHIS & LÉGER “Recherches de parasitologie” 1911.—*T. spermophilus* p. 511, *annamense* of *Equidae* Annam p. 513, **spp. n.**, classificatory remarks; LAVERAN Ann. Inst. Pasteur 25.—*T. theileri*, des boeufs tunisiens, culture et morphologie; MANCEAUX, YAKIMOFF & YAKIMOVA Bul. soc. path. exot. 4 pp. 378–380 figs.—*T. undulans* Fr. & Ath., of frogs, regarded as a well-defined species; *T. elegans* Fr. & Ath., also *T. inopinatum* and perhaps *T. hendersoni* Patton, probably only other phases of same species; FRANÇA C. R. Soc. Biol. 70 pp. 978 & 979.—*T. uniforme sp. n.*, morphological notes and comparison with *T. vivax*; BRUCE, HAMERTON, BATEMAN & MACKIE Proc. R. Soc. B 83 pp. 176–179 pl. xii.—*T. ziemanni*, see under *T. noctuae*.—*T. spp. varr.* (*brucei* or *pecardii*, *evansi*, *vivax* or *cazalboui* and *nanum* or *pecorum*), morphology compared; FRY Rep. Wellcome Res. Lab. 4 Vol. A (Med.) pp. 41–56 pl. i.—*T.* of cattle (type *theileri-transvaaliense*), Holland, morphology of cultural forms; SWELLENGREBEL Bull. Soc. Path. exot. 4 pp. 536–538 17 text-figs.—*T. sp. n.*, bei Rindern in Uruguay, morphologische und experimentelle Studien; PETER Arch. Schiffshyg. 14 Beih. 6 40 pp. 1 pl.—*T. spp.* of birds, perhaps new, morphological notes; CARDAMATIS Centralbl. Bakt. Abt. 1 61 Orig. pp. 98–102 1 pl.—*T.* von See-fischen pp. 112–136, *T. dohrni sp. n.* in *Solea monochir* Golf von Neapel pp. 128–129, *T. sp. n.* in *Syngnathus acus* Golf von Neapel pp. 129–132 (Russ.); YAKIMOFF Jurjev Zeitschr. wiss. u. prakt. Veterin. med. 5 1911 1 pl.

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Uroglena marina sp. n., Kiel harbour; BÜTTNER Wiss. Meeresunters. Abth. Kiel N.F. 12 p. 127 text-fig. 6.

Allied to Flagellata :—

COCCOLITHOPHORIDAE.

Pontosphaera borealis sp. n. East Greenland Sea, diagnosed; OSTENFELD Medd. Grøn. 43 p. 284 text-fig. 11.

Syracosphaera lohmanni sp. n. Adriatic; BRUNNTHALER Intern. Rev. Hydrobiol. 3 p. 546 1 text-fig.

(b) Silicoflagellata (vacant).

(c) Dinoflagellata.

New genera and species of Dinoflagellates, diagnosed. (Reports on the scientific results of the expedition to the eastern tropical Pacific in charge of Alexander Agassiz, by the U. S.

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Acanthogonyaulax subgen. n. (*Gonyaulax*) type *G. ceratocoroides* pp. 202 & 247; KOFOID Univ. Cal. Pub. Zool. 8.

Amphidinium globosum p. 651 text-fig. 16, *aculeatum* p. 650 fig. 14, *A. (?) lanceolatum* p. 650 fig. 15, spp. n., Adriatic; SCHRÖDER SitzBer. Ak. Wiss. Wien Abth. I 120.—*A. operculatum* Clap. & Lach., occurrence in numbers at Port Erin and note on appearance; HERDMAN J. Linn. Soc. Zool. 32 pp. 71-75 pl. viii.

Amphidoma curtata, depressa, p. 274, *elongata, laticincta*, p. 275, *obtusa* p. 276, spp. n., Eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. 54.

Amphisolenia astragalus, quadricauda, p. 293, *truncata* p. 294, spp. n., Eastern tropical Pacific; KOFOID & MICHENER T.c.

Berghiella gen. n. (incert. sed.) *perplexa* sp. n. p. 301, Eastern tropical Pacific, diagnosed; KOFOID & MICHENER T.c.

Centrodinium expansum p. 286, *porulosa* p. 287, spp. n., eastern tropical Pacific; KOFOID & MICHENER T.c.

Ceratium Schrank eine kurze Monographie; JÖRGENSEN Intern. Rev. Hydrobiol. 2 biol. Suppl. No. i pp. 1-124 10 pls.—*C. gravidum* varr. n. *angustum* p. 10 fig. 8, *latum* p. 11 fig. 9, *C. pentagonum* var. n. *turgidum* p. 21 fig. 33, *C. kofoidii* nom. n. p. 23 figs. 38 & 39, *setaceum* p. 23 figs. 40 & 41, *humile* p. 40 figs. 82 & 83, spp. n., *C. breve* var. n. *curvulum* p. 41 fig. 85, *C. gracile* f. *orthoceras* n. form. p. 44 fig. 95, *C. schmidtii* sp. n. p. 50 figs. 110 & 111, *C. platycorne* var. n. *cuneatum* p. 59 fig. 126, *C. sumatranum* ff. *angulatum, recurvum* nn. form. p. 74 figs. 155 & 156, *C. pavillardii* p. 74 figs. 157 & 158, *leptosomum* p. 80 fig. 167, spp. n.; JÖRGENSEN T.c.—*C. dalmaticum* p. 643 text-fig. 10, *aestuarium* p. 648 fig. 13, spp. n., Adriatic, diagnosed; SCHRÖDER SitzBer. Ak. Wiss. Wien Abth. I 120.—*C. hirundinella*, Formveränderung als Anpassungerscheinung; KRAUSE Intern. Rev.

Hydrobiol. biol. Suppl. Ser. 3 2 pp. 1-32.—*C. tripos* var. *subsalsus* Ostf. biologische Studie u. Formenkreis; APSTEIN Wiss. Meeresunters Abt. Kiel N.F. 12 pp. 135-162 10 text-figs.

Dinophysis collaris, expulsa, p. 292, *rugosa* p. 293, spp. n., eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. 54.—*D. homunculus* Stein var. n. *gracilis*, Adriatic; SCHRÖDER SitzBer. Ak. Wiss. Wien Abth. I 120 p. 636 text-fig. 7.

Diplopsalis lenticula vide *Peridinium* and *Peridiniopsis*.

Ellobiocystis gen. n. p. 188, type *Ellobiocystis caridarum* Coutière pp. 188 192 pl. viii figs. 11-21, *villosus* p. 200 text-fig. 5a, *tuberosus* p. 200 text-fig. 5b, *flicollis* p. 201 pl. viii fig. 37 & text-fig. 6a, *catenatus* p. 201 text-fig. 6b, *tenuis* p. 202 pl. viii fig. 39 & text-fig. 6c, *mysidarum* p. 203 pl. viii figs. 7-10, spp. n., occurrence and diagnoses; COUTIÈRE Bul. sci. France 45.

Ellobiopsis racemosus and *caridarum*, spp. n., occurrence and notes on structure; COUTIÈRE C. R. Acad. sci. 152 pp. 409-411.

Fusigonyaulax subgen. n. (*Gonyaulax*) type *G. birostris* pp. 201 246; KOFOID Univ. Cal. Pub. Zool. 8.

Goniodoma reticulata p. 276, *crassa* p. 277, spp. n., Eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. 54.

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Gymnodinium biciliatum sp. n., freshwater, account of; OHNO Tokyo J. Coll. Sci. **32** Art. 2 pp. 77-92 1 pl.

Heterodinium angulatum, elongatum, laeve, p. 284, *lineatum, minutum*, p. 285, *spiniferum* p. 286, spp. n., eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. **54**.

Histioneis diomedea p. 294, *costata, elongata*, p. 295, *hippoperoides, hyalina*, p. 296, *inclinata, inornata*, p. 297, *karsteni, panda*, p. 298, *reginella, rotundata*, p. 299, *striata* p. 300, spp. n., eastern tropical Pacific; KOFOID & MICHENER T.c.

Ornithocercus formosus, orbiculatus, p. 300, spp. n., eastern tropical Pacific; KOFOID & MICHENER T.c.

Oxyrrhis, see under Flagellata.

Oxytoxus brevis p. 287, *recurvus, robustus*, p. 288, spp. n., eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. **54**.

Peridiniella gen. n. (near *Peridinium*) p. 279, *sphaeroidea* sp. n. p. 280, eastern tropical Pacific, diagnosed; KOFOID & MICHENER T.c.

Peridiniopsis asymmetrica sp. n. (*Diplopsalis lenticula* p. p.), characterised by arrangement of plates; MANGIN C. R. Acad. sci. **153** pp. 30 & 31 2 text-figs.—*P. a.* described; id. T.c. pp. 644-647 5 text-figs.

Peridinium annulatum p. 280, *corniculatum* p. 281, *hyalinum* p. 281, *karsteni, nodulosum* p. 282, *pacifica, poucheti*, p. 283, spp. n., eastern tropical Pacific; KOFOID & MICHENER Bull. Mus. Comp. Zool. Harvard Coll. **54**.—*P. lenticulatum* nom. nov. (for *Diplopsalis lenticula* var. *minor*), characterised by arrangement of plates; MANGIN C. R. Acad. sci. **153** pp. 30-32 3 text-figs.—*P. paulseni* nom. n. for *P. lenticulatum* Mangin (to avoid confusion), described; MANGIN T.c. pp. 647-649 5 figs.—*P. spp.*, modifications of the cuirass; MANGIN Intern. Rev. Hydrobiol. **4** pp. 44-54 pls. vii & viii.

Phalacroma circumcincta p. 288, *favus, fimbriata, gigantea*, p. 289, *limbata, porosa*, p. 290, *praetexta, pulchra, turbinea*, p. 291, spp. n., eastern tropical Pacific; KOFOID &

MICHENER Bull. Mus. Comp. Zool. Harvard Coll. **54**.

Protoцератium cancellorum p. 277, *globosum, pellucidissimum*, p. 278, *pepo, promissum*, p. 279, spp. n., eastern tropical Pacific; KOFOID & MICHENER T.c.

Spiraulax gen. n. (Peridinida) genotype *Gonyaulax jolliffei* California; description; KOFOID Univ. Cal. Pub. Zool. **8** pp. 295-300 pl. xix.

Staphylocystis gen. n. (*Ellobiopsidae*) type *Ellobiopsis racemosus* Coutière, described; COUTIÈRE Bul. Sci. France-Belgique **45** p. 189 pl. viii figs. 1-6.

Steiniella Schütt reduced to subgen. of *Gonyaulax* pp. 202 & 247; KOFOID Univ. Cal. Pub. Zool. **8**.

(d) Rhynchoflagellata (vacant).

5. CILIOPHORA.

(a) Ciliata.

Nordische Ciliata mit Ausschluss der Tintinnoidea; HAMBURGER & BUDDENBROCK in Nordisches Plankton Lfg **15** No. xiii 152 pp. 185 text-figs.

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Ocelosoma gen. n. (near *Prorodon*), *marina* sp. n., occurrence and description; ANIGSTEIN T.c. pp. 137-146 pl. x figs. 12-15.

Colpidium colpoda, permutation nucléaire dans la conjugaison; DEHORNE C. R. Acad. sci. **152** pp. 1354-1357.

Colpoda cucullus, true conjugation here, with nuclear fusion; DANGEARD C. R. Acad. sci. **152** pp. 1032-1035 5 text-figs. Also T.c. pp. 1703-1705.

Conchophrys gen. n. (near *Microthoracinae*), *dauidoffi* sp. n., occurrence and description; CHATTON Arch. Zool. exp. Sér. 5 8 N. et R. pp. xiv-xx text-figs. 5 & 6.

Cothurniopsis antarctica, *subglobosa*, spp. nn., région Antaretique; DADAY Állatt. Közlem. 10 pp. 97 & 114 2 text-figs.

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III. PORIFERA OR SPONGIDA

ARRANGED BY

I. B. J. SOLLAS

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT INDEX:—	
General works, economics, and technique	4
Anatomy	4
Physiology	4
Development	4
Ethology	5
Distribution:—	
Actual	5
Fossil	5
SYSTEMATIC:—	
Porifera, general	5
Calcarea	6
Homocoela	6
Heterocoela	6
Hexactinellida	6
Lyssacina	6
Dictyonina	6
Demospongiae	6
Tetractinellida	6
Choristida	6
Lithistida	6
Monaxonida	6
Hadromerina	6
Halichondrina	6
Keratosa	8
Incertae sedis	8

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II.—SUBJECT—INDEX.

GENERAL WORKS, ECONOMICS AND TECHNIQUE.

Announcement of successful outcome of experiments in sponge culture in Florida; **Bowers**, 7.

La spongculture à Tamaris; **Delage**, 10.

Nouveaux essais de spongculture au Laboratoire maritime de Biologie de Tamaris-sur-Mer; **Dubois**, 12.

Bemerkungen über die technische Ausführung und biologische Verwertung mikroskopischer Messungen; **Lenzenfeld**, 24.

General treatise on Freshwater sponges; **Annandale**, 1.

General account of sponges; **Dendy**, 11.

STRUCTURE.

Collar cells *Sycon*; **Huxley**, 18.

New type of canal system; **Kirkpatrick**, 22.

Clavidisc; a form of microscle; **Kirkpatrick**, 22.

Ueber den Ursprung der Microscle der Desmacidoniden; **Hentschel**, 16.

Calcareous asters in *Hymeniacidon* sp., regularly arranged, below dermal membrane; regarded as foreign bodies; **Row**, 33.

Structure of Pharetronid fibre; **Kirkpatrick**, 21.

Beobachtungen über Reduktionsvorgänge bei Spongilliden, nebst Bemerkungen zu deren äusserer Morphologie und Biologie; **Müller**, 27.

PHYSIOLOGY.

The iodine complex in sponges (3, 5-diiodotyrosine); **Wheeler** and **Mendel**, 44.

Beobachtungen über Reduktionsvorgänge bei Spongilliden, nebst Bemerkungen zu deren Biologie; **Müller**, 27.

Reductionserscheinungen bei Süsswasserschwämmen; **Müller**, 26.

DEVELOPMENT.

Sur les affinités des *Halichondria* et la classification des Halichondrines d'après leurs formes larvaires; **Topsent**, 37.

Embryology of sponges and its phylogenetic significance; **Kemna**, 20 & 20a.

Development of sponges from dissociated tissue cells; **Wilson**, 45.

Regulation and regeneration in *Chondrosia reniformis*; **Maas, 25.**

Regeneration, *Sycon*; **Huxley, 18.**

Versuche über die Regenerationsfähigkeit der Süßwasserschwämme; **Müller, 30.**

Das Regenerationsvermögen der Süßwasserschwämme, insbesondere Untersuchungen über die bei ihnen vorkommende Regeneration nach Dissociation und Reunion; **Müller, 28.**

Untersuchungen über nichtfunktionelle Korrelation in der Bildung selbstständiger Skeletelemente und das Problem der Gestaltbildung in einheitlichen Protoplasamassen; **Becher, 5.**

Mitosis of collar cells of *Heterocoela*; **Robertson, 32.**

ETHOLOGY.

Symbiosis between barnacle and *Spongilia* sp.; **Row, 33.**

Sponges associated with the shells of Vermetidae in the Bay of Bengal; **Annandale, 3.**

Simbiosi della *Suberites domuncula* con la *Dromia vulgaris*; **Polimanti, 31.**

Ephydatia fluviatilis in grossen Tiefen; **Weltner, 43.**

EVOLUTION AND PHYLOGENY.

Suggested mode of origin of porocytes; **Kirkpatrick, 22.**

Origin of systematic position of Sponges; **Kemna, 20 & 20a.**

DISTRIBUTION.

A. Actual.

European seas and freshwaters.

Baie de la Néva, *Spongilla lacustris*; **Skorikov, 34.**

African Seas.

Sudanese Red Sea, Non-Calcareous from the coastal waters, Tetraxonida 24 spp. n., Eucratosa 7 spp. n. Discussion of the affinity of the fauna; tables showing the distribution of Red Sea species in other parts; **Row, 33.**

Asiatic freshwaters.

Ephydatia fluviatilis im Issyk-Kul, first freshwater sponge from Turkestan; **Weltner, 43.**

India, Freshwater sponges, distribution; **Annandale, 1.**

India, *Spongilla* sp. n.; **Annandale, 1.**

Asiatic, etc., Seas.

Spirastrella purpurea, localities of the Siboga specimens; **Vosmaer, 41.**

Christmas Island, 1 Pharetronid sp. n.; **Kirkpatrick, 21.**

Australian Seas, Tetractinellida 2 spp. n., Monaxonida 32 spp. n.; **Hentschel, 17.**

Arctic Ocean.

Spongien des Kola-Fjords (Russ. + deutsch. Rés.), 70 known spp. and 20 new and as yet undescribed; **Breitfuss, 8.**

B. Fossil.

Upper Eocene, Capo San Marco (*Tortoniana, secondo piano mediterraneo* [parte] Suess), Sponge spicules; **Canaveri, 9.**

Studien im Gebiete des Böhmischen Kreideformation Porifera, illustrated list, 57 figg.; **Frit, 15.**

Trias-Spongien aus dem Bakony, Calcareous heterocoela 7 spp. n.; **Vinassa de Regny, 39.**

Trias-Spongien aus dem Bakony 4 spp. n.; **Vinassa de Regny, 40.**

Carboniferous Scotland, Monaxonida 2 spp. n.; **Smith, 35.**

Devonian, Iowa, *Cliona* sp. n.; **Thomas, 36.**

Ordovician, Mississippi valley, Porifera inc. sedis 3 spp. n.; **Foerste, 14.**

Silurian, Tennessee, Indiana and Illinois, Lithistida 1 sp. n.; **Foerste, 13.**

III.—SYSTEMATIC.

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(i) HOMOCOELA (vacant).

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HEXACTINELLIDA.

(i) LYSSACINA (vacant).

(ii) DICTYONINA.

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INCERTAE SEDIS.

Beatricea undulata-cylindrica var. n. p. 298 pl. ix f. 7, *nodulifera* sp. n. p. 299 pl. vii f. 13 pl. viii f. 5, *nodulifera-intermedia* var. n. p. 300 pl. viii f. 4, Mississippi Valley, Ordovician, FOERSTE Bull. Lab. Denison Univ. **14**.

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IV. COELENTERATA

ARRANGED BY

C. L. BOULENGER.

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT INDEX :—	
General and Miscellaneous = 0803	8
Structure = 0807	8
Physiology = 0811.. .. .	9
Development = 0815	9
Ethology = 0819	10
Variation and Phylogeny = 0823.. .. .	11
Distribution = 0827 :—	
Recent	11
Fossil	12
III. SYSTEMATIC = 0831 :—	
Hydrozoa (= Hydromedusae)	13
Graptolithida	15
Scyphozoa (= Scyphomedusae)	16
Anthozoa	16
Alcyonaria	16
Zoantharia	18
Ctenophora	20

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II.—SUBJECT-INDEX.

GENERAL AND MISCELLANEOUS. 0803

Nordisches Plankton, Craspedote Medusen. Fam. III Margelidae; Hartlaub, 56.

The Siphonophorae of the "Albatross" expedition to the eastern tropical Pacific; Bigelow, 10.

Pennatulacea d. D. Tiefsee-Expedition; Kükenthal & Broch, 78.

Hydroidea Vol. I. In: Faune de la Russie; Linko, 80.

Hydra und die Hydroiden, zugleich eine Einführung in die experimentelle Behandlung biologischer Probleme an niederen Tieren; Steche, 114.

Die italienische Korallenfischerei; Steuer, 116.

Abgüsse rezenter Tiefseemedusen zum Vergleich mit Fossilien aus der Kreide; Maas, 85.

STRUCTURE. 0807

General.

Morphologie des Cœlentérés, séries évolutives comparées chez les polypes et les méduses; Kemna, 68a.

Bau einer *Thyroscyphus*-Art; Kühn, 75.

Dinotheca, a new Calyptoblastic Hydroid; Stechow, 115.

Morphologie von *Polypodium hydri-forme*; Lipin, 82.

Anatomie und Histologie von *Solmundella* und der *Actinula* von *Tubularia mesembryanthemum*; Zalenskij, 141.

Anatomy of *Limnognathia tangerina*; Boulenger, 15.

Dactylanthus (Cystactis) antarcticus Anatomie; Carlgren, 19.

Untersuchungen über den Dimorphismus bei den Aleyonarien; Cylikowski, 24.

Studien über den Bau von *Pteroides griseum*; Niedermeyer, 97.

Special.

A comparison of the sense-organs in medusae of the family *Pelagidae*; Bigelow, 10.

Le pharynx des Scyphistomes; Hérouard, 58.

Haben die Scyphomedusen einen ectodermalen Schlund?; Hadži, 46.

Ueber die Gonophoren von *Hydractinia echinata*; Delsman, 25.

Skeleton.

Untersuchungen über die Bildung des Achsenskelettes einiger Gorgonaceen; Neumann, 96.

Eigentümlichkeiten im Bau der Rugosa; Yakowlew, 139.

Histology.

Sur le mode de fixation au sol des Scyphistomes par des tonofibrilles; Hérouard, 60.

Ueber die Nesselzellverhältnisse bei den Hydromedusen; Hadži, 47.

Über die Dislocation und Migration der Knidocyten bei den Hydromedusen; Hadži, 50.

Migration of the stinging-cells in medusae; Boulenger, 14; in *Limnognathia tangerina*; Boulenger, 15.

Die sekretorischen Vorgänge bei der Nesselkapselbildung der Coelenteraten; Will, 137.

PHYSIOLOGY. 0811

General.

Der Stoffwechsel der Aktinien; Pütter, 104.

Ueber die Gastrovascularströmungen bei *Aurelia aurita* L. und *Cyanea capillata* Eschz.; Widmark, 133.

Ueber den Heliotropismus von *Ceractis aurantiaca*; Schmid, 111.

Pulsations in Scyphomedusae deprived of their marginal organs; Morse, 88.

Environmental effects; response to stimuli.

Relation of salinity and temperature to distribution of *Siphonophorae*; Bigelow, 10.

Über den Einfluss mehrerer aufeinanderfolgender wirksamer Reize auf den Ablauf der Reaktionsbewegungen bei Wirbellosen. Mitt. 2: Versuche an Coelenteraten; Kinoshita, 70.

Modifications rapides de la forme sous l'influence de la privation d'oxygène chez une méduse *Eleutheria dichotoma*; Drzewina & Bohn, 27.

Experimentelle Untersuchungen an *Hydra*; Koelitz, 73.

Ueber die geschlechtliche Differenzierung und den Gonochorismus von *Hydra fusca*; Koch, 72.

DEVELOPMENT. 0815

General.

Some problems of coelenterate ontogeny; Hargitt, 53.

The early development of *Hydra*; Wager, 128.

Development of *Polypodium hydriforme*; Lipin, 81, 83.

Postembryonale Entwicklung der Actinula von *Tubularia mesembrianthemum*; Zalsenski, 141.

Der Entwicklungskreislauf von *Cunina parasitica*; Hanitzsch, 51.

Metamorphose von *Solmundella*; Zalsenski, 141.

Studies in the development of *Scyphomedusae*; Hargitt, 54.

Seconde note sur le développement des Lucernaires; Wietrzykowski, 136.

Development of *Arachnactis*; McMurrich, 86.

The formation of germ layers in *Actinia bermudensis*; Cary, 20.

Quelques observations sur le développement d'*Edwardsia*; Wietrzykowski, 135.

Early cleavage stages and experiments on cleavage of *Beroë* and *Callianira* eggs; Yatsu, 140.

Bud formation.

Bemerkungen über die Knospenbildung von *Hydra*; Hadži, 49.

Zur Frage über die Beziehungen zwischen geschlechtlicher und ungeschlechtlicher Fortpflanzung, auf Grund von Beobachtungen an Hydromedusen; Nekrassoff, 94.

Development of the medusa-buds of *Moerisia*; Boulenger, 14.

Ueber die Gonophoren von *Hydractinia echinata*; Delsman, 25.

Über Monophyiden und Diphyiden; Moser, 90.

Bud-formation in *Limnocyclus taniganicae*; Boulenger, 15.

Oogenesis.

Der Bau der Eier bei den Coelenteraten; Retzius, 106.

Oögenesis of *Hydra*; Wager, 128.

Das Verhalten des Chromatins bei der Eibildung einiger Hydrozoen; Schaxel, 110.

Regeneration and Experimental.

Retention of normal polarity in centrifuged stems of *Tubularia*; Morse, 39.

Biological studies on *Corymorpha*.
4. Budding and fission in heteromorphic pieces and the control of polarity; Torrey, 121.

Morphologische und experimentelle Untersuchungen an *Hydra*. [II: Transplantationen.]; Koelitz, 73.

Experiments on cleavage of *Beroë* and *Callianira* eggs; Yatsu, 140.

ETHOLOGY. 0819

General.

Die Biologie von *Polypodium hydriforme*; Lipin, 82.

Die Psychologie der Aktinien im Lichte neuerer Forschungen; Pax, 102.

Les réactions des Actinies aux basses températures; Bohn, 13.

Modifications rapides de la forme sous l'influence de la privation d'oxygène chez une méduse *Eleuthéria dichotoma*; Drzewina & Bohn, 27.

Relations of temperature and salinity to distribution of *Siphonophorae*; Bigelow, 10.

Seasonal fluctuations in horizontal and vertical distribution of *Siphonophorae*; Bigelow, 10.

Coral reefs.

The structure and formation of Aldabra and neighbouring islands; Fryer, 35.

Sur le rôle des Algues calcaires dans les récifs coralliens; Gravier, 43.

Sur quelques particularités biologiques des récifs madréporiques de la baie de Tadjourah; Gravier, 41-44.

Die Korallenbauten als Objekt wissenschaftlicher Forschung in der Zeit vor Darwin; Günther, 45.

Symbiosis, Parasitism, etc.

Ueber die Symbiose von Xanthellen und *Halecium ophiodes*; Hadži, 48.

Eine rezente *Kerunia*-Bildung; Fraas, 34.

Etude sur les associations entre les Pagures et les Actinies (*Eupagurus prideauxi* Haller et *Adamsia palliata* Forbes; *Pagurus striatus* Latreille et *Pagurus parasiticus* Gosse); Faurot, 29.

On two species of *Hydractinia* living in symbiosis with a hermit crab; Goto, 38.

An epizoic hydroid on a crab from Christmas Island; Calman, 18.

The association of a fish with a hydroid; Heath, 57.

On a new Gymnoblasic Hydroid (*Ichthyocodium sarcotretis*) epizoic on a new Parasitic Copepod (*Sarcotretes scopeli*) infesting *Scopelus glacialis* Rhdt.; Jungersen, 65.

Zur Bionomie von *Hebella parasitica*; Babić, 5.

Ueber die wahre Natur der von Will und Busch in Siphonophoren beobachteten „Eingeweidewürmer“; Poche, 103.

Sur quelques animaux parasites ou commensaux de Madréporaires du genre *Galaxea*; **Gravier**, 40.

Deuxième Note sur la famille des *Lumippidae*, Copépodes parasites des Alcyonaires; **Zulueta**, 142.

VARIATION AND PHYLOGENY. 0823

Variation.

Variation in the medusa of *Mærisia lyonsi*; **Boulenger**, 16.

Variation in *Aurelia aurita*; **M'Intosh**, 87.

Colour variations in Actiniae; **Walton**, 129.

Phylogeny.

Phylogenie der Narcomedusen; **Zalenskij**, 141.

Phyletic diagram of *Calycophorae*; **Bigelow**, 10.

Phylogenie der Actiniarien; **Carlgren**, 19.

Entstehungsgeschichte des *Rugosa*; **Yakowlew**, 139.

DISTRIBUTION. 0827

1. Recent.

A. MARINE.

Atlantic (including Mediterranean).

N. Atlantic, *Ichthyocodium* gen. n. (Gymnoblaster) epizoic on a Copepod infesting a Fish; **Jungersen**, 65.

Norway, fauna droebachiensis. I. Hydroids; **Broch**, 17.

British Anthozoa, notes; **Walton**, 130.

West of Scotland, hydroid fauna; **Ritchie**, 109.

Shetland Is. *Bougainvillia britannica* var. n.; **Hartlaub**, 56.

Roscoff, note sur les Hydroides; **Bedot**, 9.

Adriatic, *Aglaophenia* sp. n.; **Babić**, 5.

Gulf of Trieste, Hydromedusae spp. n.; **Neppi & Stiasny**, 95.

Trieste, *Bougainvillia* sp. et var. nn.; **Hartlaub**, 56.

Rovigno, die Ctenophorenfauna nach den Novemberstürmen 1910; **Krumbach**, 74.

Hydroidea der Russischen Meere; **Linko**, 80.

Black Sea, *Virgularia mirabilis*; **Balss**, 7.

Kongomündung, Margelidae gen. n.; **Vanhöffen**, 124.

Cuba, *Ceratopora*; the type of a new family of Alcyonaria; **Hickson**, 61.

Indian Ocean.

Indian Ocean, new Hydromedusae; **Vanhöffen**, 124.

Golfe d'Aden, les récifs de coraux et les madréporaires de la baie de Tadjourah; **Gravier**, 41-44.

East Africa, new Pennatulid; **Kükenthal & Broch**, 78.

Cape of Good Hope and Natal, Alcyonaria spp. n.; **Thomson**, 118, 118a.

Agulhas Bank, Calyptoblastea gen. n.; **Stechow**, 115.

Persian Gulf, Madrepোরaria spp. n.; **Harrison**, 55.

Gulf of Bengal, *Hormiphora* sp. n.; **Ghigi**, 36.

Christmas Island, an epizoic hydroid on a crab; **Calman**, 18.

Malay Archipelago, Gorgonacea of the Siboga Expedition, gen. et spp. n.; **Nutting**, 98.

Malay Archipelago, *Arachnactis* sp. n.; **McMurrich**, 86.

Amboina, Pennatulacea gen. n.; **Kükenthal & Broch**, 78.

Aru- und Kei-Inseln, Alcyonaria, spp. n.; **Kükenthal**, 76.

Südwest-Australien, Actiniaria spp. et gen. nn.; **Lager**, 79.

Pacific Ocean.

Beiträge zur Naturgeschichte Ostasiens, *Anthomastus* spp. n.; **Kükenthal**, 77.

Japanische Pennatuliden, spp. n.; **Balss**, 6.

Misaki, Actiniaria; **Asano**, 3.

Nagasaki, *Virgularia gustaviana* var. *magnifolia*; Balss, 6.

Formosa, new Pennatulid; Kükenthal & Broch, 78.

W. coast of N. America hydroids, spp. n.; Fraser, 34a.

Eastern tropical Pacific, Siphonophora of the "Albatross" expedition; Bigelow, 10.

Pacifico australe, Ctenophora sp. n.; Ghigi, 36.

New Zealand, Ctenophora gen. n.; Ghigi, 36.

New South Wales, Hexactiniae spp. n.; Wilsmore, 138.

New South Wales, Alcyonaria spp. n.; Thomson & Mackinnon, 117.

New South Wales, Hydrozoa spp. n.; Ritchie, 108.

Victorian Hydroida, spp. n.; Mulder & Trebilcock, 93.

Marquesas-Insel, *Cavernularia* sp. n.; Balss, 7.

Samoa, *Thyroscyphus* sp. n.; Kühn, 75.

Arctic.

Barents Sea and White Sea, *Halcium* spp. n.; Linko, 80.

Antarctic.

Antarctic, *Dactylanthus* gen. n. for *Cystiactis antarctica*; Carlgren, 19.

Bouvet-Insel, *Anthomastus antarcticus* sp. n.; Kükenthal, 77.

Bouvet-Insel, *Pennatula phosorea* var. n.; Kükenthal & Broch, 78.

B. FRESHWATER AND LACUSTRINE.

Cordylophora lacustris (?) in the Illinois river; Smith, 113.

Microhydra, medusa in Germany; Schorn, 112.

Occurrence of *Limnocyclus* in Indian streams; Annandale, 2; Alcock, 1.

Anatomy and bud-formation of *Limnocyclus tanganicae*; Boulenger, 15.

Mærisia lyonsi, variation of medusa; Boulenger, 16: migrations of stinging-cells; Boulenger, 14.

2. Fossil.

La paléontologie et la distribution géographique des Actinies; Pax, 101.

Monograph of British Graptolites, Part viii; Elles & Wood, 28.

Cainozoic.

Die jungtertiäre Fauna von Gatun am Panamakanal; Toula, 122.

Weitere Notizen zur alttertiären Korallenfauna von Barcelona; Oppenheim, 99.

Mesozoic.

Die oberkretazische Korallenfauna von Klagsdorf in Mähren; Trauth & Remeš, 123.

Trias-Korallen aus dem Bakony; Papp, 100.

Trias-Tabulaten und Hydrozoen, Bakony; Vinassa de Regny, 127.

Neue Tabulaten und Hydrozoen aus dem Bakony; Vinassa de Regny, 126.

Palaeozoic.

Carboniferous corals from Glamorganshire, *Zaphrentis* sp. n.; Dixon & Vaughan, 26.

Carboniferous of Nebraska, new coral; Barbour, 8.

Carboniferous Limestone (Avonian) of Somerset, corals, *Endophyllum* sp. n.; Reynolds & Vaughan, 107.

Silurian of the Cautley district, Graptolites, sp. n.; Watney & Welch, 131.

Silurian, a colony of Graptolites from Sweden; Horn, 63.

Silurian, Monroe formation of southern Michigan; Grabau, 39.

Silurian of Tennessee, Indiana and Illinois; new Zoantharians; Foerste, 30.

III.—SYSTEMATIC. 0831

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V. ECHINODERMA

ARRANGED BY

HERBERT L. HAWKINS, M.Sc., F.G.S.

CONTENTS.

	PAGE
I. TITLES	4
II. SUBJECT INDEX:—	
General = 1003:—	
1. Historical	16
2. General treatises	16
3. Bibliography	16
4. Pedagogy (vacant)	
5. Museums	16
6. Technique	16
Structure = 1007:—	
1. General accounts	16
2. Symmetries	16
3. Homologies of classes (vacant)	
4. Skeletal tissue (vacant)	
5. Skeletal anatomy	16
6. Hydrocoel, etc.	17
7. Other body cavities	17
8. Digestive system	17
9. Nervous system, etc.	17
10. Mesodermal tissues (vacant)	
11. Axial organ	17
12. Generative organs	17

Physiology = 1011:--

1. General (vacant)						
2. Circulation (vacant)						
3. Respiration .. .. .	..	..	..	..	..	17
4. Alimentation, etc. .. .. .	..	..	..	..	..	17
5. Excretion (vacant)						
6. Sensation .. .. .	..	..	..	..	..	17
7. Experimental .. .. .	..	..	..	..	..	17

Development = 1015:—

1. General principles (vacant)						
2. General accounts .. .. .	..	..	..	..	..	17
3. Formation of gonads .. .. .	..	..	..	..	..	17
4. Oviposition, etc. .. .. .	..	..	..	..	..	18
5. Larval stages .. .. .	..	..	..	..	..	18
6. Organogeny .. .. .	..	..	..	..	..	18
7. Post-larval growth-stages .. .. .	..	..	..	..	..	18
8. Experimental Embryology .. .. .	..	..	..	..	..	18

Ethology = 1019:—

1. General accounts .. .. .	..	..	..	..	..	19
2. Special habits .. .. .	..	..	..	..	..	19
3. Habitat, .. .. .	..	..	..	..	..	19
4. Feeding .. .. .	..	..	..	..	..	19
5. Defence and protection .. .. .	..	..	..	..	..	19
6. Locomotion .. .. .	..	..	..	..	..	19
7. Autotomy and Regeneration.. .. .	..	..	..	..	..	19
8. Parasites and Commensals .. .. .	..	..	..	..	..	19
9. Protection of young .. .. .	..	..	..	..	..	19
10. Sexual dimorphism .. .. .	..	..	..	..	..	19
11. Relation to other animals .. .. .	..	..	..	..	..	19
12. Geological aspect .. .. .	..	..	..	..	..	20
13. Phaenology .. .. .	..	..	..	..	..	20

Variation and Aetiology = 1023:—

1. Variation in form .. .. .	..	..	..	..	..	20
2. Variation in colour (vacant)						
3. Variation, meristic, numerical .. .. .	..	..	..	..	..	20
4. Variation, meristic, homoeotic (vacant)						
5. Variation, teratological .. .. .	..	..	..	..	..	20
6. Variation, bionomic (vacant)						
7. Variation, mutational .. .. .	..	..	..	..	..	20
8. Evolution, general principles.. .. .	..	..	..	..	..	20
9. Relations to other phyla (vacant)						
10. Phylogeny .. .. .	..	..	..	..	..	20

Distribution = 1027 :—

A. Geographical—

i. General	..	..	..	..	..	20
ii. Atlantic Ocean, etc.	..	..	..	..	..	20
iii. Indian Ocean, etc.	..	..	..	..	..	20
iv. Pacific Ocean, etc.	..	..	..	..	..	21
v. Arctic Ocean, etc.	..	..	..	..	..	21
vi. Antarctic Ocean, etc.	..	..	..	..	..	21

B. Geological—

i. General	..	..	..	..	..	21
ii. Cainozoic—						
(a) General	..	..	..	..	..	21
(b) Pleistocene	..	..	..	..	..	21
(c) Pliocene	..	..	..	..	..	21
(d) Miocene	..	..	..	..	..	21
(e) Oligocene	..	..	..	..	..	21
(f) Eocene	..	..	..	..	..	21

iii. Mesozoic—

(a) General (vacant)						
(b) Cretaceous (1. Upper; 2. Lower)	..	..	..	..	..	22
(c) Jurassic (1. Upper; 2. Lower)	..	..	..	..	..	22
(d) Lias (and Rhaetic)	..	..	..	..	..	22
(e) Trias	..	..	..	..	..	22

iv. Palaeozoic—

(a) General (vacant)						
(b) Permian	..	..	..	..	..	22
(c) Permo-Carboniferous (vacant)						
(d) Upper Carboniferous	..	..	..	..	..	23
(e) Lower Carboniferous	..	..	..	..	..	23
(f) Devonian	..	..	..	..	..	23
(g) Silurian	..	..	..	..	..	23
(h) Ordovician	..	..	..	..	..	23
(k) Cambrian	..	..	..	..	..	23

III. SYSTEMATIC INDEX = 1031 :—

A. General	..	..	..	..	..	23
B. Holothuriodea	..	..	..	..	..	23
C. Echinoidea	..	..	..	..	..	24
D. Asteroidea	..	..	..	..	..	34
E. Ophiuroidea	..	..	..	..	..	38
F. Crinoidea	..	..	..	..	..	43
G. Cystidea	..	..	..	..	..	48
H. Blastoidea	..	..	..	..	..	48
K. Incertae Sedis	..	..	..	..	..	48

I.—TITLES.

The symbols inclosed in square brackets, placed after each title, indicate the sections under which the memoir is recorded; they are an amplification of the system of the Zoology schedule, though the first number is given in an abbreviated form, *e.g.*, 27 instead of 1027.

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Mus. Nat. Hist. Paris, recent Crinoids; Clark, A. H., 45.

Leyden Museum, recent Crinoids; Clark, A. H., 36.

Museums of Northern Spain, Fossil Echinoids; Jiménez de Cisneros, 124.

U. S. Nation. Mus., N. Pacific Ophiurans; Clark, H. L., 52.

National Museum of Chile, recent Echinoderms; Quijada, 192.

Discovery of type of *Eodiadema granulatum*; Horwood, 113.

6. Technique.

Histologic study of Spatangids; Hornyold, 112: Methods of staining developing ova of Ech; Schaxel, 202.

Cinématographie du développement de *Paracentrotus*; Chevroton & Vlès, 34.

STRUCTURE. 1007

1. General.

Of Echinoderma generally; Bather,

9.

Of Holothurians; Becher, 14: of *Cucumaria japonica*; Ōshima, 186.

Comparative anatomy of Recent and Cretaceous Irregular Echinoids; Klinghardt, 127.

2. Symmetries.

Of Crinoids; Clark, A. H., 43.

5. Skeletal Anatomy.

Of *Echinonēus*; Westergren, 244: of *Micraster*, *Hemipneustes*, *Ananchytes* and *Conulus* compared with recent forms; Klinghardt, 127: of *Euryalae*; Döderlein, 69: of *Marsupites*; Clark, A. H., 49.

Ambulacra and phyllodes of fossil Echinoidea; Hawkins, 105: Amb. in *Echinoconus*; Loescher, 158.

Apical system of Clypeastroids; Tornquist, 230: in Echinoids, comp. with calyx in Crinoids; Mortensen, 182.

Radioles of Spatangids; Hornyold, 112: of Holactypoida, as indicated by tuberculation; Hawkins, 106.

II.—SUBJECT INDEX.

GENERAL. 1003

1. Historical.

History of names *Clypeaster*, *Echinanthus*, *Echinarachnius*, *Echinocyamus*, *Echinodiscus*, *Echinoneus*; Clark, H. L., 51: of genus *Cidaris*; Lambert & Thiéry, 150.

Genera proposed by Brandt; Lambert & Thiéry, 151.

2. General Treatise.

Pošta, 191.

3. Bibliography.

Of Echinoids generally; Lambert & Thiéry, 153: of genera of *Diadematiidae*; Lambert & Thiéry, 152: of N. American tertiary Echinoids; Stefanini, 219.

Of Asteroidea; Fisher, 81.

Of Australian crinoids; Clark, A. H., 38.

5. Museums.

Hastings Museum, Echinodermata; Butterfield, 27.

Tuberculation of interambulacra of Holoetypoida; **Hawkins, 106.**

Pedicellariae in *Goniasteridae*; **Fisher, 81.**

Arm ossicles in recent crinoids; **Clark, A. H., 41**; Brachials in *Hybocystis*; **Springer, 214.**

Calyx, arms and stem in *Pelmatozoa*; **Kirk, 126.**

Magnesium carbonate percentage in *Metacrinus* and *Heliometra*; **Clark, A. H., 47.**

6. Hydrocoel, etc.

In *Echinarachnius*; **Gregory, 96**; in *Echinonæus*; **Westergren, 244.**

Traces of circumoral ring and ambulacral ampullae in Irregular Chalk Echinoids; **Klinghardt, 127.**

Podia of Spatangids; **Hornoyold, 112.**

Relations of Madreporite to stone canal and Axial Sinus in *Solaster*; **Gemmill, 89.**

7. Other body cavities.

Perihaemal sinuses in *Solaster*; **Gemmill, 89.**

8. Digestive system.

Teeth and Buccal plates in *Conulus*; **Hawkins, 104**; Lantern, etc., of post-larval *Echinonæus*; **Westergren, 244**; Mouth-structure of Spatangids; **Hornoyold, 112.**

Rudimentary auricles in *Ananchytes*; traces of gut in Irregular Chalk Echinoids; **Klinghardt, 127.**

Characters of anus in *Solaster*; **Gemmill, 89.**

9. Nervous system.

Of Crinoids; **Clark, A. H., 43.**

11. Axial organ.

Axial canals in *Pentacrinidae*; **Clark, A. H., 40.**

12. Generative organs, etc.

Gonads of *Echinocardium*; **Caullery, 29**; Traces of gonads in upper Chalk Irregular Echinoids; **Klinghardt, 127.**

Hermaphrodite Seesterne; **Buchner, 25**; Egg-ducts in *Solaster*; **Gemmill, 89.**

(N-9186 m)

PHYSIOLOGY.

1011

3. Respiration.

Respiratory podia in Spatangids; **Hornoyold, 112.**

Oxidation of ova; **Warburg, 242 & 243.**

4. Alimentation, etc.

Une levure trouvée dans le contenu intestinal de l'holothurie; **Sartory et Clerc, 200.**

Methods of feeding of Irregular Echinoids; **Hawkins, 105.**

6. Sensation.

Sensory function of podia in Irregular Echinoids; **Hawkins, 105**; **Hornoyold, 112.**

7. Experimental Physiology.

Rearing of *Echinus* hybrid; **Gardiner, 86.**

Influence of heat and cold on movements of *Asterias*; **Matisse, 173.**

Réactions des Comatules; **Bohn, 20.**

Effect of Suprarenal preparations on *Arbacia*; **Douglass, 70**; of Cyanide of Potassium on *Asterias*; **Drzewina, 73**; **Drzewina & Bohn, 74**; of glandular extracts of Starfish on blood pressure; **Gautrelet, 87**; des ferments protéolytiques; **Sellier, 207.**

Einfluss hypertotonischer Lösungen auf befruchtete Echinideneier; **Konopacki, 135.**

Atmung der *Strongylocentrotus* in reinen Chlornatriumlösungen; **Meyerhof, 176.**

DEVELOPMENT.

1015

2. General accounts.

Of *Chiridota*; **Clark, H. L., 50.**

Reproduction by fission in *Astroceras* and *Ophiocrasis*; **Clark, H. L., 52.**

3. Formation of Gonads.

Verhalten des Mittelstückes des Echinidenspermiums bei der Befruchtung; **Meves, 175.**

Ova and Spermatozoa of Echinoderms; **Retzius, 194 & 194a**; **Schaxel, 202.**

b 5

Oogenese bei *Echinus microtuberculatus* und *Sphaerechinus granularis* (Russ.); **Bogojavlenskij**, 19.

Origin of polar and bilateral structure of Echinoid egg; **Jenkinson**, 122.

Fascia vitellogena in oocyte of *Antedon*; **Cotronei**, 60.

Plasmastruktur der Holothuriodea; **Schaxel**, 203.

Peculiar chromosome developments in *Toxopneustes*; **Heffner**, 107: Heterochromosome of male origin in ech.; **Tennent**, 225.

Ueber hermaphrodite Seesterne; **Buchner**, 25.

Biochemistry of ova of *Echinus*; **Moore**, 179.

4. Oviposition, etc.

Fécondation de *Paracentrotus*; **Dantan**, 64: of Ech. generally; **Schaxel**, 202.

Eindringen des Schwanzfadens bei der Befruchtung von Seeigeleiern; **Witschi**, 245.

Distribuzione dei prodotti sessuali maschili; **Martiis**, 172: Verhalten des sogenannten Mittelstückes des Echinidenspermiums bei der Befruchtung; **Meves**, 174.

Hermaphroisme des *Asterina*; **Drz**, 72.

Natural hybrids of Echini; **Mortensen**, 182.

Chromosomes of *Hipponoe* and *Moira*; **Pinney**, 190.

5. Larval stages.

Plutei, etc., of Ech. in Plankton; **Hensen**, 108; **Mielck**, 177; **Steuer**, 223: of Ophiurids, Asteroids and Echinoids off Scilly Isles; **Browne & Vallentin**, 24.

Abnormal larva of *Holothuria frondosa*; **Arts**, 5: *Auricularia* from Japan; **Ōshima**, 187.

Pluteus—skeleton in *Strongylocentrotus*; **Moore**, 178: Comparison of normal and hybrid larvae of *Echinus*; **Shearer, De Morgan & Fuchs**, 208.

Pentacrinoid larvae of *Hathrometra*; **Mortensen**, 181.

6. Organogeny.

Bildung selbständiger Skeletelemente und das Problem der Gestaltbildung in einheitlichen Protoplasamassen; **Becher**, 13: erste Organbildung der Ech.; **Schaxel**, 202.

Growth of suranal plate in Echinoids; **Mortensen**, 182.

Development of stem and anal plate in *Antedon*, and of *Pentremites*, and coronal plates of Echinoids illustrate recapitulation; **Cumings**, 62: Theoretical ontogeny of *Urintacrinus*; **Kirk**, 126.

7. Post-larval growth stages.

Development of test in *Abatus cavernosus*; **Mortensen**, 180: in *Echinonæus*; **Westergren**, 244.

Petit exemplaire de *Conulus subconicus*; **Valette**, 233.

Characters of young hybrid *Echinus*; **Shearer, De Morgan & Fuchs**, 208.

Change from 6 to 5 arms in ontogeny of *Astroceras* and *Ophiocrasis*; **Clark**, H. L., 52.

8. Experimental Embryology.

Rearing of *Echinus miliaris*; **MacBride**, 164: Respiration of ova; **Warburg**, 242.

Cytotropische Vereinigung unbefruchteter Seeigeleier (Russ.); **Eismond**, 75.

Effect of hypertonic solutions on fertilization in Echinoids; **Konopacki**, 134 & 135: **Lillie**, 155: Isotonic solutions of neutral salts on unfertilized echinoderm eggs; **Lillie**, 156.

Catalase of echinoderm eggs before and after fertilization; **Lyon**, 162.

Phosphorus metabolism during early cleavage of echinoderm egg; **Shackell**, 201.

Permeability of eggs of *Arbacia*; **Lyon & Shackell**, 163: **McClendon**, 166 & 167: of *Toxopneustes*; **Harvey**, 103: Permeabilität des Seeigeleies für Farbstoffe; **Runnström**, 198.

Prevention of toxic action in fertilized ovum of *Arbacia*; **Loeb**, 157.

Reifung des Seesterneies bei experimenteller Parthenogenese; **Buchner**, 26: Artificial Parthenogenesis in *Strongylocentrotus*; **Hindle**, 110.

Development of isolated pieces of the gastrulae of *Strongylocentrotus*; **Jenkinson, 121.**

Hybridization of Echinoids; **Shearer, De Morgan & Fuchs, 208:** of *Echinus miliaris* and *E. acutus*; **Fuchs, 84:** of *E. miliaris* and *E. esculentus*; **Gardiner, 86:** of *Echinus* and *Echino-cardium*; **MacBride, 165.**

Kombination der heterogenen Befruchtung mit der künstlichen Parthenogenese; Antagonismus der Einwirkung des Spermas von verschiedenen Tierklassen; **Godlewski, 93.**

ETHOLOGY.

1019

1. General accounts.

Of Sea Urchins; **Bather, 10:** of Palaeozoic and Mesozoic Echinoids; **Tornquist, 230.**

Of Stelleroids; **Bather, 11:** of *Amphiura*; **Arts, 4.**

Of Pelmatozoa; **Kirk, 126.**

2. Special habits.

Rock boring by *Strongylocentrotus*; **Romanes, 197.**

Effects of light and contact with solid walls on behavior of ophiuroids; **Cowles, 61.**

Eleutherozoic habits among Pelmatozoa; **Kirk, 126.**

3. Habitat.

Of Sea-urchins and Starfish; **Süssbach & Breckner, 224:** of Pelmatozoa; **Kirk, 126.**

Of Greenland Echinoderms; **Mortensen, 181:** Bathymetric and temperature ranges of N. Pacific Ophiuroidae; **Clark, H. L., 52.**

Burial in sand of Spatangids; **Hornycold, 112.**

4. Feeding.

Feeding Habits of Spatangids; **Hornycold, 112:** of Crinoidea; **Kirk, 126.**

Influence of feeding habits on evolution of Echinoids; **Douvillé, 71:** **Hawkins, 105.**

(N-9186 m)

5. Defence and Protection.

Variation in degree of calcification during life of Ophiuroids; **Clark, H. L., 52.**

Colouring of *Strongylocentrotus*; **Awerinzew, 7.**

6. Locomotion.

Lantern of Aristotle used in locomotion; **Gemmell, 88.**

7. Autotomy and Regeneration.

Autotomy in holothurians; **Pearse, 188:** of stem in Crinoidea; **Kirk, 126.**

Regeneration of arms in *Amphio-plus*; **Clark, H. L., 52:** of entire *Linckia* from single arm; **Fisher, 81:** of *Linckia* and other Ech.; **Korscheldt & Heider, 136.**

8. Parasites and Commensals.

Nematodes parasitic in gut of *Auricularia*; **Ōshima, 187:** Gre-garines in *Chirodota*; **Sokolow, 213.**

Echinophyes mirabilis parasitic in *Eurocidaris perrieri*; **Koehler, 132:** Crab in apex of *Toxocidaris*; **Thiéry, 229.**

Dendrogaster in *Poraniopsis*; **Fisher, 81.**

Raumparasitismus einer Ophiure in einer Schnecke; **Simroth, 211.**

Myzostomids in stems of fossil Crinoids; **Jahn, 120:** *Loxosomella* on *Hathrometra proluxa*; **Mortensen, 184.**

9. Protection of young.

In *Henricia*; **Fisher, 81.**

Marsupial pouches in *Abatus* and *Pseudabatus*; **Koehler, 131.**

10. Sexual Dimorphism.

Differences in apical system in *Acrosaster*; **Lambert, 141.**

Proportionate numbers of sexes in Crinoids; **Kirk, 126.**

11. Relation to other animals.

Economic aspect of Sea Urchins; **Bather, 10:** of Starfish; **Bather, 11.**

Trepang in Philippine Islands; **Seale, 206.**

12. In Geological aspect.

Palaeozoic iron-minerals indicating former crinoidal limestone; **Cayeux, 30.**

13. Phaenology.

Of Echin. larvae in Plankton; **Mielcke, 177.**

VARIATION AND ÆTIOLOGY.

1023

1. Variation in form.

In *Echinoconus*; **Loescher, 158**: in *Echinonëus*; **Westergren, 244.**

3. Variation, meristic, numerical.

Variation in number of arms in *Amphiodia*, *Ophiacantha*, *Ophiactis*, *Ophiologimus* and *Ophiopholis*; **Clark, H. L., 52**: in *Asterina*, *Linckia*, *Pteraster*, *Solaster*; **Fisher, 81.**

Six-rayed *Antedon costatus*; **Leuthardt, 154.**

5. Variation, teratological.

In apex of *Toxocidaris* due to presence of parasitic crab; **Thiéry, 229.**

Abnormal freedom of *Carabocrinus*; **Kirk, 126.**

7. Variation, mutational.

Über die Grösse der Variabilität und ihre biologische Bedeutung; **Peter, 189.**

Variation in skeleton of *plutei* of *Strongylocentrotus*; **Moore, 178.**

8. Evolution, general.

Eleutherozoic habit marks degeneration in Cystidea but progress in Crinoidea; **Kirk, 126.**

Evolution of Echinoids; **Douvillé, 71**: of Palaeozoic and Mesozoic Echinoids; **Tornquist, 230.**

10. Evolution, phylogenetic.

Of Echinoderma; **Bather, 9.**

Of Holothurians; **Becher, 14**: of Holothurians, Echinoids and many families of Crinoids; **Kirk, 126.**

Genealogical table of *Scutellidae*; **Stefanini, 218**: of *Peribrissus*, *Agas-*

sizia and *Echinolampas*; **Stefanini, 220.**

Pentremites descended from *Codaster*; **Cummings, 62.**

Of phyllode structure; **Hawkins, 105**: of Tuberculation of Irregular Echinoids; **Hawkins, 106.**

Of nervous system and symmetry of crinoids; **Clark, A. H., 43.**

DISTRIBUTION. 1027

A. GEOGRAPHICAL.

i. General.

Of Echinoidea; **Mortensen, 180**: of *Scutellidae*; **Stefanini, 218.**

Of Echinoderm larvae in plankton; **Théel, 227.**

ii. Atlantic Ocean, etc.

North Sea, Scarborough, *Echinus*, *Solaster*; **Irving, 117**: **Woods, 246**: Scilly Isles, Larval and adult Echinoderms [List]; **Browne & Vallentin, 24.**

Migration of *Arbacia* into Mediterranean; **Stefanini, 221.**

Mauritania, Echinoderms; **Koehler, 133**: Côte occidentale d'Afrique, Echinoderms; **Koehler, 128**: **Vaney, 234**: African recent Crinoids; **Clark, A. H., 48.**

Philippine Islands, Holothurians; **Seale, 206**: Asteroids; **Fisher, 79**: Unstalked crinoids; **Clark, A. H., 39**: *Comaster*; **Clark, A. H., 42.**

West Indies, *Echinonëus*; **Westergren, 244**: Havana, *Blakia*; **Fisher, 82.**

iii. Indian Ocean, etc.

Cyclometra gen. n.; **Clark, A. H., 44.**

Zanzibar, spp. n. in *Heterometra*; **Clark, A. H., 45**: E. African recent Crinoids; **Clark, A. H., 48.**

Kerguelen Islands, Asteroidea, Ophiuroidea; **Koehler, 129**: Mergui Archipelago, Burma, Ophiuroidea; **M'Intosh, 168.**

Aru-Inseln, Echinoidea; **Döderlein, 68**: Seychelles, *Pelagothuria*; **Simpson, 210.**

iv. Pacific Ocean, etc.

Victoria, *Trochodota*; Allan, 1: S.W. Australia, Crinoidea; Clark, A. H., 38.

New Caledonia, sp. n. in *Oligometra*; Clark, A. H., 45.

East Indies, *Echinocyamus*; Westergren, 244: *Thalassocrinus*; Clark, 46: Hawaiian Islands, *Hyalinothrix*; Fisher, 78.

Japan, *Auricularia*; Ōshima, 187: Holothurioidea; Augustin, 6: Euryalae; Döderlein, 69: *Astroclon*; Mortensen, 183.

North Pacific, Asteroidea; Fisher, 81: Ophiuroidea; Clark, H. L., 52.

v. Arctic Ocean, etc.

Nord- und Ostsee, *Echinus*, *Oulcita*; Süssbach & Breckner, 224: Kola fjörd, Ech. (general); Derjugin, 65.

Greenland, Ech. (general); Grieg, 100: N.E. Greenland, Ech. of Danmark-Expedition; Mortensen, 181.

Holothurians and Asteroidea of "Fram" Expedition; Grieg, 98: Duc d'Orléans, Campagne de 1907; Grieg, 99.

vi. Antarctic Ocean, etc.

Kermadec Islands, Stellerids and Echinids; Benham, 16: Christmas Island, *Comissia* sp. n.; Clark, A. H., 37.

South Australia, *Asterodiscus* sp. nov.; Coleman, 55: New Zealand, *Goniodon*, *Pentaceros*; Koehler, 130.

British Antarctic Expedition; Koehler, 131: Pourquoi-Pas? Expedition; Koehler, 132: Swedish Antarctic Expedition, and Tierra del Fuego, Echinoids; Mortensen, 180.

B. GEOLOGICAL.

i. General.

Evidence of former geography based on distrib. of Tertiary Echinoids; Stefanini, 222.

ii. Cainozoic.

a. General.

Distribution of *Scutellidae*; Stefanini, 218; North American Tertiary Echinoids; Stefanini, 219.

b. Pleistocene.

Brabant, Derived Jurassic fossils as pebbles; Tesch, 226.

Taubenbank, Golfe von Neapel, Holothurians, Echinoids, Asteroidea, Ophiurids, Echinoids; Walther, 240.

c. Pliocene.

Bassin du Rhône, Plaisancien, Echinoidae; Lambert, 146.

Isola di Citera, *Clypeaster*, *Echinolampas*; Nelli, 185.

Panama canal, *Encope* sp. n.; Toula, 231.

Victoria, Batesford Limestone, Echinoidae, Asteroidea, Crinoidea; Chapman, 31.

d. Miocene.

Touraine, *Brissus*, *Phymatopagus*; Lambert, 140: Bassin du Rhône, Helvétien, Echinoidae; Lambert, 146.

Sardinia, *Clypeaster*, *Echinolampas*; Lovisato, 159 & 160: Friuli, *Brissopsis*, *Mariania*, *Schizaster*; Stefanini, 217.

Coalinga district, California, Vaqueros, Jacalitos and Etchegoin, *Astrodapsis*, *Echinarachnius*, *Scutella*; Arnold & Anderson, 3.

f. Eocene.

Paris, Echinoidae; Lambert, 143.

Biarritz, Echinoids; Castex, 28: Priabonian Colli Berici, Crinoidea, Echinoidae; Fabiani, 76: Cati (Alicante), *Prenaster*; Jiménez de Cisneros, 123.

Bahna, Roumania, Echinoidae; Macovei, 169: Grola in Cornedo [in basic tuff], Echinoidae; Dal Lago, 63.

Cyrenaica, n. spp. in *Amphiope*, *Schizaster* and *Sarsella*; Gregory, 97: Egypt, Echinoidae; Hume, 116: Senegal, *Oligopygus* sp. n.; Lambert, 138.

Miike Coalfield, Japan, *Pentacrinus*; Yokoyama, 247.

Seymour, Isle, Antarctic, *Cassidulus*, *Schizaster*; Lambert, 147.

iii. Mesozoic.

b. Cretaceous.

1. Upper Cretaceous.

Hampshire, *Echinocorys*, *Bourguetiacrinus*; Griffith & Brydone, 102: Hunstanton, *Cidaris*, *Holaster*, *Salenia*, *Pentacrinus*; Jackson, 118: Keston, Kent, *Uintacrinus*; Dibley, 67.

Chartres, Upper Chalk, *Uintacrinus*; Fillozat, 77: Cotentin, calc. à Baculites, Echinoidea; Lambert, 142: Haute-Marne, Echinoids; Thiéry, 228: Rennes-Bains et Corbières, Echinides; Lambert, 145: Yonne, Echinoidea; Valette, 233.

Sicily, *Hemiaster*; De Stefano, 66.

Aragon, Cénomanien et Sénonien, Echinides; Lambert, 144.

Böhmen, Cenoman, Echinoidea, Crinoidea; Frič, 83: Saxony, Chalk, Echinoidea, Asteroidea; Wanderer, 241: Simbirk, *mucronata* chalk, n. spp. in *Salenia* and *Goniaster*; Laghusen, 137.

Egypt, Cenomanian-Danian, Echinoidea; Hume, 116: Bordj-Sabath, Algérie, Maëstrichtien, Echinides; Blayac & Cottreau, 18.

Desert Sandstone, Queensland, *Micraster*; Chapman, 33: Gingin, W. Australia, Chalk, *Phyllacanthus*; Glauret, 92.

Seymour Isle, Antarctic; Maëstrichtien and Aturien, *Cyathocidaris*, *Hemiaster*; Lambert, 147.

Peru, Kreide, *Holcotypus*; Salfeld, 199.

Mississippi, Tombigee Sandstone, *Marsupites*; Springer, 216.

2. Lower Cretaceous.

Hunstanton, Carstone, *Pentacrinus*; Jackson, 118.

Haute-Marne, Aptien, *Salenia*, *Miotoxaster*; Thiéry, 228.

Seymour Isle, Antarctic; Cénomanien and Vraconien, *Holaster*, *Nordenskjoldaster*; Lambert, 147.

c. Jurassic.

1. Upper Jurassic.

Penshurst, Kimmeridge Clay, *Saccocoma*; Bather, 12.

Haute-Marne, Echinoids; Thiéry, 228: Haute Saône, Oxfordien, Echin., Crin.; Maire & Deecke, 171.

Bei Hannover, Echinoidea; Schöndorf, 204: Lausen, Hornsteinknollen, *Antedon*; Leuthardt, 154: Stramberg, Tithon, *Desorella* sp. n.; Blaschke, 17.

West Australia, Echinoidea and Crinoidea; Glauret, 91.

3. Lower Jurassic.

Near Cirencester, Great Oolite and Cornbrash, *Acrosalenia*, *Cidaris*, *Clypeus*, *Echinobrissus*, *Hemicidaris*; Richardson, 195: Near Oxford, Cornbrash, *Acrosalenia*, *Holcotypus*, *Pygurus*; Allorge & Bayzand, 2: Bristol, Lower Oolites, Echinoids; Tutchter, 232.

Pelvoux, ? Bajocien, *Pygomalus*; Lambert, 139: Tarascon, Hauterivien, *Alpicidaris*; Saint-Gaultier, Vésulien, *Thierychinus*; Bathonien, *Acrosaster*; Lambert, 141.

Sardegna, Batonian, *Echinobrissus*; Fucini, 85.

Thomar, Aalenian, Echinoidea; Choffat, 35.

d. Lias (including Rhaetic).

Somersetshire, Lower Lias, *Hemipedina*, *Pseudopedina*; Richardson, 196: Keynsham, nr. Bristol, *Pseudodiadema*; Vaughan & Tutchter, 236: Leicestershire, *A. spinatus* zone, *Eodiadema*; Horwood, 113: Glen Parva, Leicestershire, *Ophiolepis*; Horwood, 114.

Haute-Marne, Crinoids; Thiéry, 228.

e. Trias.

Haute-Marne, *Encrinus*; Thiéry, 228.

Germany, Asteroidea; Schoendorf, 205.

Aargauer Tafeljura, Muschelkalk, Crinoidea; Brändlin, 22: Dobrogea, *Cidaris*, *Encrinus*; Simionescu, 209.

iv. Palaeozoic.

b. Permian.

Kansas, Marion Stage, *Archaeocidaris*; Beede, 15.

d. Upper Carboniferous.

Bristol Coal Measures, Crinoid columnals; **Bolton, 21**: Lancashire Middle Coal Measures, *Archaeocidaris*; **Jackson, 119**.

Spitzbergen, Mittelkarbon, *Platycrinus* sp. n.; **Holtedahl, 111**.

Brazil Limestone, *Archaeocidaris*, *Eupachyrcrinus*, *Zeacrinus*; **Greene, 94**.

Oklahoma, Wewoka formation, Crinoidea; **Girty, 90**.

e. Lower Carboniferous.

St. Andrews, Calcareous sandstone (in Volc. agglomerate), Echinoidea and Crinoidea; **Balsillie, 8**: Solway, Echinoidea, Crinoidea; **Smith, 212**: Culm, near Exeter, Crinoid stems; **Collins, 57**.

West Australia, Crinoidea; **Glauert, 91**.

Indiana, Huron group, *Echinocrinus*, Crinoidea, *Pentremites*; **Greene, 95**: Indiana and Kentucky, Knobstone formation, Crinoids; **Springer, 215**.

f. Devonian.

Cornwall, Ophiurids, Crinoids; **Colins, 56**.

Belgian fossil localities, Infra-devonian, Asteroidea, Crinoidea, Cystidea; **Maillieux, 170**.

Steiermark, Grauwackenzone, Crinoidea; **Heritsch, 109**.

Geneva-Ovid Quadrangles, Crinoidea; **Luther, 161**: Indiana, Mid. Devonian, *Dimerocrinus*, *Dorycrinus*, *Schultziocrinus*; **Springer, 216**: Ithaca beds, Tully Quadrangle, Crinoids; **Clarke & Luther, 53**: Wisconsin, Middle Devonian, Crinoidea; **Cleland, 54**.

g. Silurian.

Ingleborough, Horton Flags, *Actinocrinus*; **Hughes, 115**: Montgomeryshire, Llandovery rocks, *Glyptocrinus*; **Wade, 238**.

Gotland, Crinoidea; **Van Hoepen, 235**: Kristiania, Obersilur, Crinoidea; **Kiaer, 125**.

Eljovic, Böhmen, Crinoidenreste; **Želízko, 249**.

Oklahoma, Hunton Formation, Crinoidea; **Reeds, 193**.

h. Ordovician.

Montgomeryshire, Pwll-y-glo Beds, *Cyathocrinus*, *Sphaeronites*; Gaerfawr Grits, *Glyptocrinus*; **Wade, 238**.

Trenton Limestone, Crinoidea; **Springer, 214**.

k. Cambrian.

Böhmen, Crinoidea, Cystidea; **Želízko, 248**.

Victoria, Upper Cambrian, Crinoid ossicles; **Chapman, 32**.

British Columbia, Middle Cambrian, Holothurians; **Walcott, 239**.

III. SYSTEMATIC INDEX. 1031

A. GENERAL.

BATHER, Encyclopaedia Britannica, 8 p. 871; TORNQUIST Zs. indukt. Abstammungslehre Berlin 6.

Ech. of Kola-fjörd, DERJUGIN Trav. Soc. nat. St. Peterburg 42 p. 60.

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Auricularia cf. *nudibranchiata*, ŌSHIMA Annot. Zool. Jap. 7 p. 347.

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†*C. sieboldi*, MAIRE & DEECKE Bul. soc. grayloise d'Emul. 1908 p. 29.

Colochirus australis var. *armatus*, AUGUSTIN München Abh. Akad. Wiss. Suppl. 1911 p. 29.

Cucumaria echinata p. 23, *C. japonica* p. 25, AUGUSTIN T.c.—*C. frauenfeldi*, VANEY Ann. Inst. Océan. Paris 2 p. 26 figs. 1-3.—*C. frondosa*, MORTENSEN Medd. Grøn. 45 p. 278 pl. xvii figs. 9 10 & 13.—*C. japonica*, OSHIMA Dobuts. Z. Tokyo 23 p. 182.—*C. minuta*, GRIEG Second Arctic Exp. in the "Fram" 1909 p. 43.

C. tegulata sp. n. Japan, AUGUSTIN München Abh. Akad. Wiss. Suppl. 1911 p. 24.

†*Eldonia* gen. n. p. 45, type †*E. ludwigi* sp. n. Middle Cambrian British Columbia p. 46 pl. viii fig. 3, pl. ix figs. 1-5, pl. x figs. 1-3, pl. xi figs. 1-3, pl. xii figs. 1-3 textfig. 5, WALCOTT Smithsonian Misc. Coll. 57.

†*Eldoniidae* fam. nov., including only *Eldonia*, WALCOTT T.c. p. 45.

Holothuria dosfeini sp. n. Japan, AUGUSTIN München Abh. Akad. Wiss. Suppl. 1911 p. 4 pl. i fig. 1.

Laetmogone violacea, AUGUSTIN T.c. p. 21.

†*Laggania* gen. n. of *Holothuriidae*, type †*L. cambria* sp. n. Middle Cambrian, British Columbia, WALCOTT Smithsonian Misc. Coll. 57 p. 52 pl. xiii fig. 1.

†*Louisella* gen. n. of *Holothuriidae*, type †*L. pedunculata* sp. n. Middle Cambrian, British Columbia, WALCOTT T.c. p. 53 pl. xiii fig. 4.

†*Mackenzia* gen. n. of *Synaptidae* p. 54, type †*M. costalis* sp. n. Middle Cambrian, British Columbia, WALCOTT T.c. p. 55 pl. xiii figs. 2 & 3.

Mesothuria murrayi var. *parva*, AUGUSTIN München Abh. Akad. Wiss. Suppl. 1911 p. 18.

Molpadia blakei grönlandica var. n., MORTENSEN Medd. Grøn. 45 p. 285.

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Pseudocucumis japonicus, AUGUSTIN München Abh. Akad. Wiss. Suppl. 1911 p. 29.

Psolidium mitsukurii sp. n. Japan, AUGUSTIN T.c. p. 29 pl. ii fig. 3.

Psolus asper sp. n. Japan, AUGUSTIN T.c. p. 30 pl. ii fig. 4.

Rhopalodina lageniformis, VANEY Ann. Inst. Océan. Paris 2 p. 27.

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Stichopus armatus p. 10, *S. japonicus* p. 6 fig. 4, AUGUSTIN T.c.

S. depressus p. 11 pl. i fig. 4, *S. nigripunctatus* p. 7 pl. i fig. 2, *S. roseus* p. 13, *S. sagamiensis* with var. n. *alba* p. 8 pl. i fig. 3, spp. n., Japan, AUGUSTIN T.c.

Synallactes chuni sp. n. Japan, AUGUSTIN T.c. p. 14 pl. i fig. 5.

Thyone multipes sp. n. Japan, AUGUSTIN T.c. p. 27 pl. ii fig. 2.

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T. fusiforme p. 36 pl. ii fig. 6, *T. simile* p. 38 pl. ii fig. 7, spp. n., Japan, AUGUSTIN T.c.

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Acanthocidaris curvatispinis, LAMBERT & THIÉRY Bul. Soc. Sci. nat. Haute-Marne 6 1909 pl. i.

†*Acrosalenia hemicydaroides*, ALLORGE & BAYZAND London Proc. Geol. Ass. 22 p. 4.—†*A. lamarcki* p. 1 pl. i figs. 1-4 & 13, †*A. lycetti* p. 6 pl. i fig. 12, †*A. patella* p. 6 pl. i fig. 14, †*A. pustulata* p. 5 pl. i figs. 5-7, †*A. spinosa* p. 5 pl. i fig. 11, †*A. wiltoni* p. 2 pl. i fig. 8, THIÉRY Bul. Soc. Nat. Haute-Marne 1.—†*A. rolleti*, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. ii pl. iv figs. 5 & 6.—†*A. spinosa*, THIÉRY Bul. Soc. sci. Haute Marne 7 p. 33 fig. 169.—†*A. cf. spinosa*, RICHARDSON London Proc. Geol. Ass. 22 p. 106.

†*Aerosaster* gen. n. of *Arbaciidae*, *A. micheleti* sp. n., type, Bathonien, Galère, LAMBERT Lyon Ann. Soc. Linn. 57 p. 6.—†*A. micheleti*, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii pl. vi figs. 22-27.

†*Actinopsis*, Lambert 1897 v. *Lambertechinus*.

Alexandria, *A. magnifica* is type CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.

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Anomolanthus, *A. tumidus* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 604.

†*Anorthopygus michelini* LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 74.—†*A. orbicularis*, HAWKINS Geol. Mag. 8 (C) p. 449.

†*Aplocidaris* gen. n. of *Cidaridae* (*Leiocidarinae*), †*Cidaris helenae* V. de Regny is type, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 27.

Arachnoides, *A. echinarachnius* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.

Arbacia dufresnii, MORTENSEN Schwed. Südpolar-Exped. 6 4 p. 25 pl. v figs. 4-12 pl. xv figs. 2-3 6 8-10 13.

A. crassispina sp. n. Nightingale Island, MORTENSEN T.c. p. 32 pl. v figs. 1-3 pl. xv figs. 1 4-5 7 11 14.

†*Arbacia*, †*A. spadai*, Pliocene, STEFANINI Riv. ital. paleont. 17 p. 1.

†*Arbacina* discussed p. 22, †*A. catenata* p. 27 pl. i figs. 52-58, †*A. sulcata* p. 32, †*A. tenera* p. 28 pl. i figs. 59-62, LAMBERT Abh. Schweiz Pal. Ges. 37.

†*A. macrophyma* Helvétien Cucuron p. 31 pl. ii figs. 2-5, †*A. jacqueti* Langhien Les Istres p. 30 pl. i figs. 67-70, †*A. savini* Langhien Nyons p. 30 pl. i figs. 71 & 73, spp. n., LAMBERT T.c.

†*Archaeocidaris* sp. Middle Coal Measures, Lancashire, JACKSON London Geol. Mag. 8 p. 403.

Asthenosoma varium, DÖDERLEIN Abh. Senckenb. Ges. 34 p. 243 pl. x fig. 11.

Astridylpeinae subfam. nov. of *Scutellidae*, STEFANINI Boll. Soc. geol. ital. 30 p. 749.

Astridylpeus, *A. manni* is type, CLARK, H. L. Ann. Mag. Nat. Hist. 7 p. 605.

†*Astrodapsis jacialitosensis* p. 108 pl. xxxvii fig. 5, †*A. whitneyi* pl. xxxiii

fig. 1, ARNOLD & ANDERSON Bull. U. S. Geol. Surv. 398.

Astropyga rediagnosed, *A. radiata* is type, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 60.

Austrocidaris canaliculata, MORTENSEN Schwed. Südpolar-Exped. 6 4 p. 11 pl. iii figs. 6-8 pl. iv figs. 4-11 pl. xiv figs. 1-2 6-11 16-18.

A. spinulosa sp. n. Falkland, MORTENSEN T.c. p. 23 pl. iii figs. 3-5 pl. xiv figs. 3-5 12-15.

†*Balanocidaris* subgen. n. of *Cidaris*, †*B. glandifera* (Münster) is type, and many other spp. are referred to it, LAMBERT Schwed. Südpolar-Exped. 3 No. 11 p. 4.—†*B. cucumifera*, THIÉRY Bul. soc. sci. Haute-Marne 7 p. 30 fig. 143.—†*B. gibberula*, LAMBERT Carcassonne Bul. Soc. étud. Sci. 22 p. 40 pl. ii. fig. 29.

†*B. miqueli* sp. n. Santonien Val. de la Douce, LAMBERT T.c. p. 44 pl. ii figs. 4 & 5.

†*Bothriolampas abundans*, HUME London Q. J. Geol. Soc. 67 p. 134.

†*Bothriopygus schweinfurthi*, HUME T.c. p. 129.

Brissopsis lyrifera, SUSSBACH & BRECKNER Wiss. Meeresunters. 12 p. 189.

Brissus carinatus, BENHAM Trans. N. Zealand Inst. 43 p. 162.

†*B. lecointreae* sp. n. Faluns de la Touraine, LAMBERT Feuille jeunes natural. Paris 41 p. 4 pl. i figs. 2-3.

†*Caratomus dollfusi* p. 14, †*C. truncatus* p. 13, LAMBERT Caen Bul. soc. linn. sér. 6 2.

†*Cardiaster ananchytis*, WANDERER Tierverst. Kreide Sachsen p. 14 pl. ii fig. 11.—†*C. integer*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 93.—†*C. subtrigonatus*, BLAYAC & COTTREAU Paris Bul. Soc. géol. (4) 9 p. 426.

†*Cassidulidae*, subdivided, HAWKINS Geol. Mag. 8 (B) p. 264.

†*Cassidulus californicus*, ARNOLD & ANDERSON Bull. U. S. Geol. Surv. 398 p. 70 pl. xxvi fig. 1.

†*C. andersoni* sp. n. Tertiary Antarctic, LAMBERT Schwed. Südpolar-Exped. Bd III No. 11 p. 8 pl. i figs. 34-38.

†*Catopygus albensis*, FRIÖ Arch. Natw. LdDurchf. Böhmen 15 p. 74 fig. 314; WANDERER Tierverst. Kreide-Sachsen p. 13 pl. ii fig. 9.—†*C. carinatus*, HAWKINS Geol. Mag. 8 (B) p. 261 pl. xiii fig. 9.—†*C. conformis*, LAMBERT Caen Bul. soc. linn. sér. 6 2 p. 15 pl. i fig. 19.

Centrostephanus rediagnosed and synonymy, *C. longispinus* is type, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 57.—*C. mexicanus*, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. ii pl. iii.—*C. setosus*, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 58.

†*C. longispinus*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 21 pl. i figs. 39 & 40.

†*C. rhodanicus* "Mayer," Langhien, Beaucaire, sp. n., LAMBERT T.c. p. 20 pl. i fig. 47.

Chaetodiadema, *C. granulatum* is type, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 60.

Cidaridae, classification and genera, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 27.

Cidaris mertonii sp. n. Aru-Ins., DÖDERLEIN Abh. Senckenb. Ges. 34 p. 237 pl. ix figs. 3-8.

†*C. calamus* p. 113 pl. i fig. 13, †*C. cervicornis* p. 112 pl. i fig. 12, †*C. oosteri* p. 111 pl. i fig. 11, FABIANI Roma Mem. Soc. XL 15.—†*C. muricata*, THIÉRY Bul. soc. Sci. Haute-Marne 7 p. 55 fig. 306.—†*C. papillata* fig. 309, †*C. sorigneti* fig. 308, †*C. vesiculosa* fig. 307 p. 72, FRIÖ Arch. Natw. LdDurchf. Böhmen 15.—†*C. pyrenaica*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 36.—†*C. sorigneti* p. 12 pl. ii fig. 4, †*C. (Tylocidaris) strombecki* p. 11 pl. ii fig. 5, †*C. (Dorocidaris) vesiculosa* p. 11 pl. ii fig. 3, WANDERER Tierverst. Kreide Sachsen.—†*C. tribuloides*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 9 pl. i figs. 41-43.

†*C. fresvillensis* p. 4 pl. i figs. 5-8, †*C. nigellensis* p. 6, spp. n., Aturien Cotentin, LAMBERT Caen Bul. soc. linn. sér. 6 2.—†*C. rennensis* sp. n. Campanian, Mte. des Cornes, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 36 pl. ii figs. 12 & 13.

†*Circopeltis meridanensis*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 72 pl. ii figs. 19 & 21.

†*C. couloui* sp. n. Éocène Paris, LAMBERT Elbeuf Bul. soc. étud. sci. nat. 1910 p. 4 pl. i figs. 1 & 2.

†*Clitopygus haimeii*, THIÉRY Bul. soc. sci. Haute-Marne 7 p. 51 fig. 277.

Clypeaster, *C. rosaceus* is type, CLARK, H. L. Ann. Mag. Nat. Hist. 7 p. 604.

†*C. altus*, †*C. pliocenicus*, NELLI Roma Rend. Acc. Lincei 20 p. 565.—†*C. breunigi*, FABIANI Roma Mem. Soc. XL 15 p. 120 pl. i figs. 19 & 20.

†*C. bassanii* p. 33 pl. i fig. 3, †*C. canavarii* p. 33 pl. i fig. 4, †*C. capellinii* p. 31 pl. i fig. 1, †*C. isseli* p. 34 pl. ii fig. 1, †*C. torquati* p. 32 pl. i fig. 2, spp. n., Miocene Sardinia, LOVISATO Riv. ital. paleont. 17.—†*C. biarritensis* var. *trotteri* nov. Eocene Cyrene, GREGORY Q. J. Geol. Soc. 67 p. 662 pl. xlvii fig. 1.—†*C. breunigi* vars. *typica*, *lorioli* and *oppenheimi* nov. (latter probably a distinct species) Eocene Egypt, GREGORY T.c. p. 663.—†*C. douvillei* sp. n. Oligocene Jasper County, STEFANINI Boll. Soc. geol. ital. 30 p. 682 pl. xxii fig. 1.—†*C. gustavi* p. 140 pl. xvi fig. 1, †*C. lamarmorai* p. 141 pl. xvii fig. 1, spp. n., Miocene Sardinia, LOVISATO Paleontogr. Ital. 16.

†*Clypedolampas ovum* p. 91 pl. iii figs. 4 & 5, †*C. toucasi* sp. n. Campanien Sougraigne p. 92. pl. iii figs. 1-3, LAMBERT Carcassonne Bul. Soc. étud. sci. 22.

†*Clypeus hugi* p. 261 pl. xiii fig. 6, †*C. ploti* p. 260 pl. xiii fig. 7, HAWKINS Geol. Mag. 8 (B).—†*C. mulleri*, RICHARDSON London Proc. Geol. Ass. 22 p. 102.

†*Codiopsis doma*, FRIÖ Arch. Natw. LdDurchf. Böhmen 15 p. 72 fig. 310; WANDERER Tiervorst. Kreide Sachsen p. 12 pl. ii fig. 7.

†*Coelopleurus equis*, FABIANI Roma Mem. Soc. XL 15 p. 115 pl. i figs. 14 & 15.

†*Collyrites bicordata* p. 40 fig. 211, †*C. elliptica* p. 38 fig. 190, THIÉRY Bul. soc. sci. Haute-Marne 7.

†*Colpotiara sauvaleti* sp. n. Oxfordien Niort, LAMBERT & THIÉRY Essai

nomencl. rais. Ech. fasc. iii p. 184 pl. v figs. 16-19.

†*Conoclypeus delanouei*, HUME London Q. J. Geol. Soc. 67 p. 126.

†*Conulus albogalerus*, †*C. subrotundus*, HAWKINS Geol. Mag. 8 (A) p. 71 pl. iii.—†*C. albogalerus*, HAWKINS Geol. Mag. 8 (C) p. 451.—†*C. subconicus*, VALETTE Auxerre Bul. Soc. Sci. hist. nat. p. 147 fig. 9.—†*C. subrotundus*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 78.

†*Cotteaudia* nom. nov. pro *Cottaldia* Desor, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 229.

†*Ctenocidaris* gen. n. near *Rhynchocidaris* p. 3, *C. speciosa* Antarctic Ocean p. 4 pls. i-ii iii figs. 1-2 pl. iv figs. 1-3 pl. xiii, MORTENSEN Schwed. Südpolar-Exped. 6 4.

†*Cyathocidaris*, subgen. n. of *Cidaris*, †*C. cyathifera* (Agassiz) is type p. 4, †*C. erebus* p. 7 pl. i figs. 1 23-30a, †*C. nordenskjoldi* p. 5 pl. i figs. 2-18, †*C. patera* p. 6 pl. i figs. 19-22, spp. n., Uppermost Cretaceous, Seymour Isle (Antarctic), LAMBERT Schwed. Südpolar-Exped. Bd III No. 11.—†*C. avenionensis*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 11 pl. i figs. 20-23.—†*C. cyathifera*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 45 pl. ii figs. 24 & 27.

†*Cyphosoma* cf. *majus*, HUME London Q. J. Geol. Soc. 67 p. 120.—†*C. pulchrum*, FABIANI Roma Mem. Soc. XL 15 p. 117 pl. i fig. 16.

Dendraster, *D. excentricus* is type, CLARK H. L., Ann. Mag. Nat. Hist. 7 p. 605.

†*Desorella moravica* sp. n. Tithon Stramberg, BLASCHKE Wien Ann. Nat-hist. Hofmus. 25 p. 180 pl. vi fig. 11.

Diadema, rediagnosed and synonymy, *D. turcarum* is type, LAMBERT & THIÉRY Bul. Soc. Sci. Nat. Haute-Marne 6 1909 p. 56.

Diocptella bigoti sp. n. Tortonien Manche, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 233 pl. vii figs. 1-3 [plate unpublished].

†*Dictyopleurus haimeii*, HUME London Q. J. Geol. Soc. 67 p. 135.

†*Disasterinae*, contains genera *Disaster* and *Metaporhinus*, LAMBERT

Grenoble, Bul. soc. stat. sci. nat. arts ind. 11 p. 369.

†*Discoidea cylindrica*, HAWKINS Geol. Mag. 8 (A) p. 72; (C) p. 448.

†*Discoides minimus*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 75.

†*Diplopodia dumasi* v. *Tetragramma dumasi*.

†*D. houdardi* sp. n. Hauterivien, Haute-Marne, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. ii pl. iv figs. 14-17 fasc. iii p. 187.

Dorocidaris papillata, SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 174.

†*D. chercherensis*, HUME London Q. J. Geol. Soc. 67 p. 129.—†*D. defrancei*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 37.—†*D. papillata*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 16 pl. i figs. 37 & 38.

†*D. allardi* Molasse Beaucaire p. 14 pl. i fig. 36, †*D. deydieri* Helvétien Reillanne p. 16 pl. iii figs. 4 & 6, †*D. gattungae* Langhien Beaucaire p. 13 pl. i figs. 1-4 & 46, †*D. mingaudi* Pliocene bassin du Rhône p. 18 pl. i figs. 44 & 45, spp. n., LAMBERT Abh. Schweiz. Pal. Ges. 37.—†*D. brasili* sp. n. Aturien Cotentin, LAMBERT Caen Bul. soc. linn. sér. 6 2 p. 7 pl. i figs. 1-4.

†*Echinanthus airaghi*, FABIANI Roma Mem. Soc. XL 15 p. 122 pl. ii fig. 1.

Echinarachnius, *E. parma* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.—*E. parma*, GREGORY Zool. Anz. Leipzig 38 p. 323.

†*E. gibbsii* p. 125 pl. xxxv figs. 1 & 2 pl. xli fig. 2 pl. xlii fig. 7 pl. 1 fig. 4 var. *ashleyi* pl. xli fig. 1, ARNOLD & ANDERSON Bull. U. S. Geol. Surv. 398.

†*Echinobrissus clunicularis*, FUCINI Pisa Atti Soc. tosc. sc. nat. 27 p. 106 pl. i fig. 8.—†*E. humei*, HUME London Q. J. Geol. Soc. 67 p. 120.—†*E. woodwardsi*, RICHARDSON London Proc. Geol. Ass. 22 p. 102.

Echinocardium cordatum, KLINGHARDT Innere Organisation-Seeigel u.s.w. pls.—*E. cordatum* p. 191, *E. flavescens* p. 193, SÜSSBACH & BRECKNER Wiss. Meersunters. 12.—*E. flavescens*, HORNOLD Fribourg Mém. Soc. Sci. Nat. 1 p. 34.

†*Echinoconus albogalerus*, †*E. vulgaris*, KLINGHARDT Innere Organisation Seeigel u.s.w. pls.—†*E. roemeri* p. 75, †*E. subconicus* p. 67, †*E. vulgaris* p. 71, LOESCHER Cassel Festschr. Ver. f. Natk. 1911.—†*E. sp.*, FRÍO Arch. Natw. LdDurchf. Böhmen 15 p. 73 fig. 311b.

†*Echinocorys vulgaris*, HUME London Q. J. Geol. Soc. 67 p. 126.

†*E. scutatus* var. *depressus* p. 32 pl. ii figs. 3-5, var. *subconicus* p. 32 pl. iii figs. 6-10, var. *truncatus* p. 32 pl. iii fig. 11 pl. iv fig. 12, varr. n., Upper Chalk Hampshire, GRIFFITH & BRYDENE Zones of Chalk in Hants.

Echinocyamus, *E. angulosus* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.—*E. pusillus*, KLINGHARDT Innere Organisation-Seeigel u.s.w. pls.—SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 187; THÉEL Stockholm Vet.-Ak. Handl. 47 p. 10.

†*Echinocyphus matronensis* sp. n. Turonien Marne, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 216 pl. v figs. 20-24.

Echinodiscus, *E. bisperforatus* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.

Echinolampas depressus, HAWKINS Geol. Mag. 8 (B) p. 257 pl. xiii fig. 1.

†*E. chercherensis* p. 669 pl. xlviii figs. 1 & 2 pl. xlix figs. 1-3, †*E. discus* p. 671, GREGORY Q. J. Geol. Soc. 67.—†*E. crameri*, fraasi, p. 138, †*E. humei* p. 135, HUME London Q. J. Geol. Soc. 67.—†*E. subaffinis*, FABIANI Roma Mem. Soc. XL 15 p. 125 pl. ii fig. 2.

†*E. cythereus* sp. n. [nom. nud.] "Stefanini," Pliocene, Isola di Citera, NELLI Roma Rend. Acc. Lincei 20 p. 565.—†*E. cytherea* sp. n. Pliocene Mediterranean, STEFANINI Riv. ital. paleont. 17 p. 12 pl. v fig. 3.—†*E. spanoi* sp. n. Miocene Sardinia, LOVISATO Paleontogr. ital. 16 p. 142 pl. xviii fig. 1.

Echinoneus cyclostomus, WESTERGREEN Mem. Mus. Comp. Zool. 39 (2) p. 44 pls. i-xxviii.

†*Echinopsis parisiensis*, LAMBERT Elbeuf Bul. Soc. étud. sci. nat. 1910 p. 1.

Echinus acutus-esculentus (hybrid), MORTENSEN Kjöbenhavn Nath. Medd. 63 p. 61 fig. 1.—*E. acutus* p. 180, var. *flemingi* and *norvegicus* p. 181, *E. elegans* p. 179, *E. esculentus* p. 183, with var. *n. depressa* p. 184 pl. i figs. 1-3, SÜSSBACH & BRECKNER Wiss. Meersunters. 12.—*E. esculentus depressa* syn. of var. *fuscus*, BRECKNER Zool. Anz. Leipzig 37 p. 254.—*E. microtuberculatus*, BOGOJAVLENSKIJ Izv. Obšč. ljub. jest. 122 p. 30 pls. ii & iii; KONOPACKI Tyg. lek. Lwów 5 pp. 682 & 691; KONOPACKI Arch. Zellforschg. Leipzig 7 p. 139.

†*E. caillaudi*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 42.

†*Ellipsechinus miocenicus*, LAMBERT Abh. Schweiz. Pal. Ges. 37 p. 47 pl. iii figs. 21 & 23.

Encope, *E. emarginatus* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7. p. 605.

†*E. gatunensis* sp. n. Pliocene Panama canal, TOULA Wien Jahrb. Geol. Reichsanst. 61 p. 486.

†*Eodiadema granulatum*, HORWOOD Northampton J. Nat. Hist. Soc. 14 p. 108.

†*Épiaster dallonii* sp. n. Cénomanien Sapeira, LAMBERT Paris Bul. Soc. géol. 10 p. 810 pl. xv figs. 4 & 5.

Eucidaris metularia, DÖDERLEIN Abh. Senckenb. Ges. 34 p. 239.

Encope, err. type for *Encope* q.v., CLARK H. L. Ann. Mag. Nat. Hist. 7 *passim*.

Eurocidaris perrieri sp. n. [nom. nud.] Antarctic, KOEHLER Paris C. R. Acad. Sci. 153 p. 736.

†*Euspatangus formosus*, FABIANI Roma Mem. Soc. XL 15 p. 135 pl. ii fig. 7.

Fibularia, *F. trigona* is type, CLARK H. L. Ann. Mag. Nat. Hist. 7 p. 605.

†*F. luciani*, GREGORY Q. J. Geol. Soc. 67 p. 664.

†*Galeropygus agariciformis*, HAWKINS Geol. Mag. 8 (B) p. 259 pl. xiii fig. 4.

†*Gitolampas fallax*, HUME London Q. J. Geol. Soc. 67 p. 129.

†*Globator* discussed p. 78, †*G. cornuum* Campanien Mte. des Cornes p. 83 pl. iii figs. 11-14, †*G. haugi* Santonien Bastié

p. 82 pl. iii figs. 6-10, spp. n., *G. nucleus* p. 80 pl. iii figs. 15 & 16, LAMBERT Carcassonne Bul. Soc. étud. sci. 22.

†*Glypticus hieroglyphicus*, THIÉRY Bul. soc. sci. Haute-Marne 7 p. 42 fig. 212.

†*Goniophorus lorioli* sp. n. Albien Basses-Alpes, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 209 pl. v figs. 8-11.

†*Goniopygus petrocoriensis*, LAMBERT Carcassonne Bul. Soc. étud. sci. 22 p. 73 pl. ii figs. 6-9.

†*Hebertia*, distinguished from *Echinopsis*, LAMBERT Elbeuf Bul. Soc. étud. sci. nat. 1910 p. 3.

†*Hemiaster*, list of spp., p. 108, †*H. desori* p. 103, LAMBERT Carcassonne Bul. Soc. étud. sci. 22.—†*H. depressus*, FRIÖ Arch. Natw. LdDurchf. Böhmen 15 p. 75 fig. 317.—†*H. neustriæ* p. 25 pl. i figs. 20-23, †*H. nucula* p. 26 pl. i figs. 24-26, LAMBERT Caen Bul. soc. linn. sér. 6 2.—†*H. pseudofourneli*, HUME London Q. J. Geol. Soc. 67 p. 123.—†*H. scillæ*, GREGORY Q. J. Geol. Soc. 7 p. 673.—†*H. sublacunosus*, WANDERER Tierverst. Kreide Sachsen p. 15 pl. ii fig. 13.

†*H. aragonensis* p. 811 pl. xv figs. 6 & 7, †*H. dallonii* p. 812 pl. xv figs. 8-10, †*H. incrassatus* p. 813 pl. xv figs. 11 & 12, spp. n., Cénomanien Sapeira, LAMBERT Paris Bul. Soc. géol. 10.—†*H. slocomi* nom. n. pro *H. lacunosus* Slocom non Goldfuss, LAMBERT Rev. crit. paléozool. 15 p. 67.—†*H. vomer* sp. n. Aturien Antarctique, LAMBERT Schwed. Südpolar-Exped. Bd III No. 11 p. 10 pl. i figs. 44-46a.

†*Hemicidaris bravenderi*, RICHARDSON London Proc. Geol. Ass. 22 p. 106.—†*H. crenularis* p. 42 fig. 213, †*H. purbeckensis* p. 51 fig. 266, THIÉRY Bul. soc. sci. Haute-Marne 7.

†*Hemipedinia* sp. Lower Lias Somerset, RICHARDSON London Q. J. Geol. Soc. 67 p. 38.

†*H. brasili* sp. n. Toarcien Caen, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 197 pl. v figs. 4-7.

†*Hemipneustes radiatus*, KLINGHARDT Innere Organisation-Seeigel u.s.w. pls.

†*Heteraster oblongus*, HAWKINS Geol. Mag. 8 (B) p. 263.

†*Heterodiadema libycom*, HUME
London Q. J. Geol. Soc. 67 p. 120.

Hipponoë esculenta, PINNEY Biol.
Bull. Woods Hole 21 p. 168.

†*Holaster planus*, KLINGHARDT In-
nere Organisation-Seeigel u.s.w. pls.;
WANDERER Tierverst. Kreide Sachsen
p. 13 pl. ii fig. 10.—†*H. suborbicularis*,
FRIË Arch. Natw. LdDurchf. Böhmen
15 p. 74 fig. 316.

†*H. lorioli* sp. n. Cénomanien Ant-
arctique, LAMBERT Schwed. Südpolar-
Exped. Bd III No. 11 p. 8 pl. i fig. 38.

†*Holectypus depressus*, ALLORGE &
BAYZAND London Proc. Geol. Ass.
22 p. 4.—†*H. depressus*, *H. hemi-
sphaericus*, HAWKINS Geol. Mag. 8 (C)
p. 447.—†*H. turonensis*, HUME London
Q. J. Geol. Soc. 67 p. 123.

†*H.* "sp. n." Kreide Peru, SALFELD
Leipzig Wiss. Ver. Erdk. 7 p. 219
pl. iv fig. 1.

†*Homoeaster blayaci* sp. n. Maes-
trichtien Algérie, BLAYAC & COTTREAU
Paris. Bul. soc. géol. (4) 9 p. 428
pl. xiv figs. 7-19.

†*Hyboclypus gibberulus*, THIÉRY Bul.
soc. sci. Haute-Marne 7 p. 33 fig. 170.

†*Hypsoclypeus hemisphericus*, GRE-
GORY Q. J. Geol. Soc. 67 p. 671.

†*Isomicraster dallonii* sp. n. Sénonien
Turbon, LAMBERT Paris Bul. Soc. géol.
10 p. 813 pl. xv figs. 13 & 14.

†*Kephrenia*, HUME London Q. J.
Geol. Soc. 67 p. 135.

Laganum, *L. laganum* is type, CLARK
H. L. Ann. Mag. Nat. Hist. 7 p. 605.

†*Lambertechinus* nom. n. pro *Actino-
psis* Lambert 1897, COSSMANN Paris
Rév. crit. Paléozool. 3 p. 45.

†*Lambertia* Oppenheim 1899 v.
Oppenheimia.

†*Lambertiaster auberti*, BLAYAC &
COTTREAU Paris Bul. soc. géol. (4)
9 p. 425.

†*Leiocidaris sismondai* p. 18 pl. i
fig. 35, †*L. thyrsgiger* p. 19 pl. i fig. 34.
LAMBERT Abh. Schweiz. Pal. Ges. 37.

†*Leiopedina samusi*, FABIANI Roma
Mem. Soc. XL 15 p. 118 pl. i fig. 17.

Linopneustes longispinus, KLING-
HARDT Innere Organisation Seeigel
u.s.w. pls.

†*Linthia cavernosa* p. 126, †*L. lorioli*
p. 134, HUME London Q. J. Geol. Soc.
67.

Lovenia subcarinata, DÖDERLEIN
Abh. Senckenb. Ges. 34 p. 247 pl. x
fig. 14.

Loxechinus albus, MORTENSEN
Schwed. Südpolar-Exped. 6 4 p. 52
pl. vi figs. 1-6 pl. viii pl. xvi figs. 2
4-5 14 16-17.

†*Macropneustes brissoides*, FABIANI
Roma Mem. Soc. XL 15 p. 133 pl. ii
fig. 6.

†*Magnosia pauperata*, BLASCHKE
Wien Ann. Nathist. Hofmus. 25 p. 181
pl. v fig. 9.

Mellita, *M. quinquiesperforatus* is
type, CLARK H. L. Ann. Mag. Nat.
Hist. 7 p. 605.

†*Micraster coranguinum*, †*M. gly-
phus*, KLINGHARDT Innere Organisa-
tion Seeigel u.s.w. pls.—†*M. corbaricus*
p. 96, †*M. mathesoni* p. 100, LAMBERT
Carcassonne Bul. Soc. étud. sci. 22.—
†*M. cortestudinarium*, WANDERER Tier-
verst. Kreide-Sachsen p. 14 pl. ii
fig. 12.—†*M. cf. sweeti* Desert sandstone,
Darling Downs, Queensland, CHAPMAN
Proc. R. Soc. Vict. n. ser. 23 p. 415.

Micropetalon purpureum, WESTER-
GREN, Mem. Mus. Comp. Zool. 39 (2)
p. 63 pls. xxix-xxxi.

†*Miotoxaster ricordeaui*, THIÉRY Bul.
soc. sci. Haute-Marne 7 p. 64 fig. 346.

†*Mistechinus mayeri*, HUME London
Q. J. Geol. Soc. 67 p. 138.

Moiria atropos, PINNEY Biol. Bull.
Woods Hole 21 p. 168.

†*Moiropsis velaini*, LAMBERT Elbeuf
Bul. Soc. étud. sci. nat. 1910 p. 9,
pl. i figs. 3-5.

Mortensenia oblonga, DÖDERLEIN Abh.
Senckenb. Ges. 34 p. 246.

†*Mortonella* p. 684, †*M. rogersi* p. 685
pl. xxii figs. 2 & 3, STEFANINI Boll. Soc.
geol. ital. 30.

†*Noellinia* nom. n. pro *Protechinus*
Noetling 1897, LAMBERT Paris Rév. crit.
Paléozool. 2 p. 126.

†*Nordenskjöldaster* gen. n. of *Homoe-
asteridae*, †*N. antarctica* sp. n. Vra-
conien Antarctique, LAMBERT Schwed.
Südpolar-Exped. Bd III No. 11 p. 10
pl. i figs. 39-43.

Notechinus magellanicus, MORTENSEN
Schwed. Südpolar-Exped. 6 4 p. 36
pl. xvi figs. 3 6 9-12 19.

†*Nucleopygus* "nov. spec." San-
tonien Sougraigne, LAMBERT Carcas-
sonne Bul. Soc. étud. sci. 22 p. 88 pl. iii
figs. 20-22.

†*Oligopygus ovumserpentis*, STE-
FANINI Riv. ital. paleont. 17 p. 10.

†*O. meunieri* sp. n. Eocene Senegal,
LAMBERT Bull. Soc. Natural. Ain. 21
p. 1 pl. i.

†*Oolopygus orbignyi* p. 19, †*O. piri-*
formis p. 15 pl. i figs. 15-16, LAMBERT
Caen Bul. soc. linn. sér. 6 2.

†*O. gracilis* sp. n. Aturien Cotentin,
LAMBERT T.c. p. 20 pl. i figs. 17 & 18.

†*Oppenheimia* nom. n. pro *Lambertia*
Oppenheim 1899, COSSMANN Paris
Rév. crit. Paléozool. 4 p. 186.

†*Orthopsis grossouvrei* sp. n. San-
tonien Val. de Bordenneuve p. 63 pl. ii
figs. 14 & 15, †*O. miliaris* p. 64 pl. ii
fig. 16, LAMBERT Carcassonne Bul. Soc.
étud. sci. 22.

†*Ovulaster auberti* var. *sabathensis*
var. n. p. 426 pl. xiv figs. 1-6, †*O.*
obtus sp. n. p. 427 pl. xiv figs. 20-28
Maestrichtien Algérie, BLAYAC & COT-
TREAU Paris Bul. soc. géol. (4) 9.

†*Palaeodiadema fragile*, VALETTE
Auxerre Bul. Soc. Sci. hist. nat.
p. 145 fig. 8.

Paracentrotus gaimardi, KOEHLER
Ann. Inst. Océan. Paris 2 p. 23 pl. ii
figs. 13 & 14 pl. iii fig. 7.—*P. lividus*,
CHEVROTON & VLÈS Arch. Zool. Paris
8 p. 499; DANTAN Paris C. R. Acad.
Sci. 152 p. 468.

†*Paracidaris florigemma* p. 42 fig. 216,
†*P. spinulosa* p. 30 fig. 142, THIÉRY
Bul. Soc. Sci. Haute-Marne 7.

†*Paralampas*, HUME London Q. J.
Geol. Soc. 67 p. 135.

†*Parapneustes* gen. n. [no species men-
tioned] Antarctic, KOEHLER Paris C. R.
Acad. Sci. 153 p. 736.

†*Parasalenia fontanesi*, LAMBERT
Abh. Schweiz. Pal. Ges. 37 p. 21 pl. i
figs. 48-51.

Parechinus miliaris, SÜSSBACH &
BRECKNER Wiss. Meersunters. 12 p. 178;
THÉEL Stockholm Vet.-ak. Handl. 47
p. 10.

†*Pedinothuria barottei* sp. n. Batho-
nien Haute-Marne, LAMBERT & THIÉRY
Essai nomencl. rais. fasc. iii p. 163
pl. v figs. 12-15; THIÉRY Bul. Soc.
Nat. Haute-Marne 1 p. 7 pl. i figs. 15
& 16.

†*Periarchus* p. 687, †*P. pileus-*
sinensis p. 688 pl. xxii figs. 4 & 5,
STEFANINI Boll. Soc. geol. ital. 30.

†*Periaster oblongus*, HUME London
Q. J. Geol. Soc. 67 p. 120.

†*Peritriassus excentricus*, STEFANINI
Riv. ital. paleont. 17 p. 7.

†*Pericossus spatangoides*, FABIANI
Roma Mem. Soc. XL 15 p. 130 pl. ii
fig. 3.

Peronella, *P. peronii* is type, CLARK
H. L. Ann. Mag. Nat. Hist. 7 p. 605.

†*Phyllobrissus borriesi* sp. n. Cam-
panien Mte. des Cornes, LAMBERT Car-
cassonne Bul. Soc. étud. sci. 22 p. 89
pl. iii figs. 17-19.

†*Phymapatagus* gen. n. of *Spatan-*
gidae, type *Spatangus britannus*, LAM-
BERT Feuille jeunes natural. Paris 41
p. 2.

†*Phymechinus mirabilis*, THIÉRY Bul.
soc. sci. Haute-Marne 7 p. 42 fig. 214.

†*Phymosoma archiaci* p. 65, †*P.*
tiara p. 67, LAMBERT Carcassonne Bul.
Soc. étud. sci. 22.—†*P. tiara* p. 135
fig. 5, VALETTE Auxerre Bul. Soc. Sci.
hist. nat.—†*P. (Gauthieria) radiatum*,
WANDERER Tiervers. Kreide Sachsen
p. 12 pl. ii fig. 6.

†*P. pseudomaresi* sp. n. Yonne Cam-
panien VALETTE Auxerre Bul. Soc. Sci.
hist. nat. p. 138 fig. 6.

†*Physaster vasseurii* sp. n. Ceno-
manien Sopeira, LAMBERT Paris Bul.
Soc. géol. 10 p. 808 pl. xv figs. 1-3.

†*Plegiocidaris coronata*, THIÉRY Bul.
soc. sci. Haute-Marne 7 p. 46 fig. 234.—
†*P. peroni*, LAMBERT Abh. Schweiz.
Pal. Ges. 37 p. 7 pl. i figs. 5-17.

†*P. cureti* sp. n. Langhien Beaucaire
(Gard), LAMBERT T.c. p. 9 pl. i figs. 18
& 19.—†*P. minor* sp. n. Bathonien
Var., LAMBERT & THIÉRY Essai
nomencl. rais. Ech. fasc. ii p. 131 pl. iv
figs. 1-4.

Plexechinus nordenskjöldi, MORTEN-
SEN Schwed. Südpolar-Exped. 6 4
p. 61 pl. xvii figs. 1-8 pl. xviii figs. 5-
12.

†*Polycyphus jauberti*, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii pl. vi figs. 19-21.

†*Praescutella cos[s]manni* sp. n. Lutétien Ecos Eure, LAMBERT Elbeuf Bul. soc. étud. sci. nat. 1910 p. 6 pl. i figs. 6-8.

†*Prenaster bericus*, FABIANI Roma Mem. Soc. XL 15 p. 131 pl. ii figs. 4 & 5.—†*P. birostratus*, LAMBERT Elbeuf Bul. Soc. étud. sci. nat. 1910 p. 7 pl. i figs. 14-18.

Prionocidaris bispinosa var. n. *aruana* ARU-INS., DÖDERLEIN Abh. Senckenb. Ges. 34 p. 240 pl. ix figs. 1 & 2.

†*Prototiara loryi* sp. n. Bathonien Isère, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 228 pl. vi figs. 8-12.

†*Psammecinus delphinus* p. 41 pl. iii fig. 7, †*P. dubius* p. 33 pl. ii figs. 6-17, †*P. ervaensis* p. 40 pl. iii figs. 12 & 15, †*P. formosus* p. 36 pl. iii figs. 8 & 11, †*P. gauthieri* p. 36, LAMBERT Abh. Schweiz. Pal. Ges. 37.

†*P. coronalis* Helvétien La Couronne p. 39 pl. iii figs. 18 & 20, †*P. deydierei* Helvétien Bassin du Rhône p. 38 pl. ii figs. 18 & 20 pl. iii figs. 16 & 17, spp. n., LAMBERT T.c.

Pseudabatus gen. n. near *Abatus*, *P. nimrodi* sp. n. Cape Royds, KOEHLER Brit. Antarct. Exped. 2 p. 60 pl. vii figs. 1-8 pl. viii figs. 7-12.

†*Pseudocidaris thurmanni*, THIÉRY Bul. soc. sci. Haute-Marne 7 p. 46 fig. 247.

†*P. drogiaca* sp. n. Bathonien Druyes, LAMBERT & THIÉRY Essai nomencl. rais. Ech. fasc. iii p. 167.

†*Pseudodiadema mendax* sp. n. Oxfordien Jura, LAMBERT & THIÉRY T.c. fasc. ii pl. iv figs. 7-10 fasc. iii p. 178.—†*P.* "sp. n." Lower Lias Keynsham, VAUGHAN & TUTCHER Bristol Proc. nat. Soc. 10 p. 53.

†*Pseudopedina tomesi*, RICHARDSON London Q. J. Geol. Soc. 67 p. 48.

†*Pseudopyrina atacina* (olim *atacica*, *ataciana* or *ataxensis*) p. 85 pl. iii figs. 23 & 24, †*P. toucasi* p. 87, LAMBERT Carcassonne Bul. Soc. étud. sci. 22.—†*P. cotteauvi*, VALETTE Auxerre Bul. Soc. Sci. hist. Nat. p. 149.

†*Pygaster morrisi* p. 446, †*P. umbrella* p. 445, HAWKINS Geol. Mag. 8 (C).—†*P. semisulcatus*, HAWKINS Geol. Mag. 8 (B) p. 259 pl. xiii fig. 3; (C) p. 444.—†*P.* sp., FRIÖ Arch. Natw. LdDurchf. Böhmen 15 p. 73 fig. 311.—†*P. thomarensis*, CHOFFAT Comm. Serv. geol. Portugal 7 (2) p. 159.

†*Pygomalus kiliani* sp. n. ? Bajocien Pelvoux, LAMBERT Grenoble Bul. soc. stat. sci. nat. arts ind. (4) 11 p. 368.

†*Pygorhytinae*, contains genera *Pygorhytis*, *Collyrites*, *Cardiopelta*, *Grasia*, LAMBERT T.c. p. 368.

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†*Typocidaris* discussed p. 49, †*T.*
corbarica p. 56, †*T. hirudo* p. 54 pl. ii
figs. 1 & 3, †*T. pseudopistillum* p. 57
pl. ii figs. 22 & 23, †*T. pseudosceptrifera*
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& 2, †*T. (S.) merceyi* p. 128, †*T. (S.)*
pseudohirudo p. 130 fig. 3, VALETTE
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nomencl. rais. Ech. fasc. iii p. 217
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& 2 pl. vi figs. 3 & 6 pl. i fig. 4 pl. li
fig 3, *A. californicus* p. 61 pl. vi figs. 1
& 2 pl. vii fig. 1 pl. i fig. 5 pl. li figs. 2
& 2a, *A. ornatus* p. 67 pl. vi figs. 3
& 4 pl. vii fig. 2 pl. li figs. 1-1c, FISHER
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irregularis p. 203, *A. pentacanthus* var.
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Ceramaster arcticus p. 219 pl. xl figs. 1 & 2 pl. lviii fig. 1 pl. lx fig. 1, *C. clarki* p. 217 pl. xxxviii figs. 3 & 4 pl. lviii figs. 2–2b pl. lix figs. 6 & 6a, *C. japonicus* p. 206 pl. xxxvii figs. 1–3 pl. lix fig. 3, *C. leptoceramus* p. 210 pl. xxxix figs. 1–3 pl. lviii figs. 3 & 3a pl. lx fig. 2, *C. patagonicus* p. 214 pl. xxxvii fig. 4 pl. xxxviii figs. 1 & 2 pl. lx fig. 3, FISHER Bull. U. S. Nation. Mus. 76.

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Dipsacaster anoplus p. 97 pl. xvi figs. 1 & 2 pl. lii figs. 4 & 4a, *D. borealis* p. 91 pl. xii figs. 1 & 2 pl. xiii fig. 1 pl. xiv fig. 2 pl. lii figs. 2–2b, *D. eximius* p. 86 pl. xi figs. 1 & 2 pl. xiii fig. 2 pl. xiv fig. 1 pl. xvi fig. 3 pl. lii figs. 1–1c, *D. laetmophilus* p. 95 pl. xii fig. 3 pl. xv figs. 1 & 2 pl. lii figs. 3–3b pl. liii fig. 2, FISHER T.c.

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Echinasteridae, list of genera, FISHER T.c. p. 259.

Eremicaster pacificus p. 29 pl. ii figs. 1–3, *E. tenebrarius* p. 24 pl. i figs. 1–4 pl. ii fig. 4 pl. liii figs. 4 & 4a, FISHER T.c.

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Henricia aspera p. 293 pl. lxxv figs. 1-5, *H. asthenactis* p. 297 pl. lxxvii fig. 1 pl. cxi figs. 4 & 4a, *H. clarki* p. 303 pl. lxxviii figs. 2 & 3 pl. cxi fig. 5 pl. cxii fig. 3, *H. laeviuscula* p. 280 pl. lxi figs. 1 & 2 pl. lxx figs. 1 & 2 pl. lxxi figs. 2 & 3 pl. cxi fig. 6, *H. l. annectens* p. 291 pl. lxx fig. 2d pl. lxxi figs. 1 & 3, *H. l. dyscrita subsp. n.* p. 289 pl. lxxiv figs. 1-5, *H. l. subsp. n.* p. 286 pl. lxxii figs. 1-4 pl. lxxiii figs. 1 & 2, *H. longispina* p. 299 pl. lxxvi figs. 1 & 2 pl. cxi figs. 3 & 3a, *H. l. aleutica subsp. n.* p. 300 pl. lxxvii fig. 2, *H. polyacantha* p. 302 pl. lxxviii figs. 1 & 4 pl. cxi figs. 2-2b, *H. sanguinolenta* p. 271 pl. lxx figs. 1 & 2 pl. lxxi figs. 1-5 pl. lxxviii fig. 3, *H. s. eschrichtii* p. 276 pl. lxxvii figs. 1-3 pl. lxxviii figs. 1 & 2, *H. spiculifera* p. 295, FISHER Bull. U. S. Nation. Mus. 76.

Heterozonias alternatus, FISHER T.c. p. 331 pl. xcvi figs. 1-3 pl. cxii figs. 5-5b.

Hippasteria californica p. 233 pl. xlv figs. 1-4 pl. lx fig. 5 pl. cxi fig. 1, *H. heathi* p. 231 pl. xlv figs. 1 & 2 pl. lviii figs. 5 & 5a pl. lx fig. 6, *H. leiopelta* p. 227 pl. xlv figs. 1-4 pl. lviii fig. 6, *H. spinosa* p. 224 pl. xlii figs. 1-3 pl. xliii figs. 1 & 2 pl. lx fig. 4, *H. spinosa kurilensis subsp. n.* p. 226 pl. xliii fig. 2 pl. cxxi fig. 1, FISHER T.c.—*H. phrygiana*, SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 215.

Hyalinothricinae subfam. n. (*Ganeriidae*), FISHER Proc. U. S. Nation. Mus. 39 p. 660.

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Hymenaster koehleri p. 373 pl. cviii fig. 1 pl. cxvii fig. 4, *H. perissonotus* p. 376 pl. cix figs. 1 & 2 pl. cxv figs. 1-1e pl. cxvii figs. 3 & 3a, *H. quadri-spinosus* p. 380 pl. cviii fig. 2 pl. cx figs. 1-3 pl. cxvii fig. 2, FISHER Bull. U. S. Nation. Mus. 76.—*H. pellucidus*, GRIEG Invert. du fond Grönland p. 554.

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Leptychaster anomalus p. 48 pl. vii fig. 4 pl. ix fig. 1 pl. i figs. 2 & 2a, *L. arcticus* p. 43 pl. viii fig. 1 pl. ix fig. 4, *L. pacificus* p. 45 pl. viii fig. 2 pl. ix fig. 2 pl. i figs. 1 & 1a, *L. propinquus* p. 54 pl. ix fig. 3, FISHER Bull. U. S. Nation. Mus. 76.

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pl. lv figs. 3 & 3a pl. lvi fig. 5 pl. cxix fig. 2 pl. cxx.

Luidiidae, diagnosis, FISHER T.c. p. 105.

Mediaster aequalis p. 198 pl. xxxv figs. 1-3 pl. lix figs. 1-1c, *M. tenellus* p. 202 pl. xxxvi figs. 1 & 2 pl. lvii figs. 3-3d pl. lix fig. 2, FISHER T.c.

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†*P. primaevus*, THIÉRY Bul. soc. sci. Haute-Marne 7 p. 40 fig. 210.

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†*Pleuraster chopi*, SCHOENDORF Hannover Jahrb. Niedersachs. geol. Ver. 1910 p. 107 fig. 4.

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Poraniopsis inflata p. 261 pl. lviii figs. 7 & 7a pl. lxiii figs. 1 & 2 pl. cxii fig. 1, *P. inflata flexilis* p. 265 pl. lviii fig. 8 pl. lxiv pl. cxii fig. 2, FISHER Bull. U. S. Nation. Mus. 76.

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pl. xxxiii fig. 4 pl. xl fig. 3 pl. lvii fig. 6, *P. pusillus* p. 187 pl. xxxii figs. 1-4 pl. xxxiii figs. 1 & 2 pl. lvii figs. 4 & 4a pl. lix fig. 4, FISHER Bull. U. S. Nation. Mus. 76.

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S. stimpsoni p. 311 pl. lxxxii fig. 3 pl. lxxxiii figs. 1-5, FISHER Bull. U. S. Nation. Mus. 76.—*S. endeca* p. 15 pl. i fig. 9, *S. furcifer* p. 17 pl. i figs. 11 & 12, *S. glacialis* p. 15 pl. i fig. 8, *S. papposus* p. 13 pl. i fig. 10, GRIEG Campagne Duc d'Orléans 1910.—*S. endeca*, GEMMILL Edinburgh Proc. R. Phys. Soc. 18 p. 174.—*S. endeca* p. 221, *S. papposus* p. 223, SÜSSBACH & BRECKNER Wiss. Meersunters. 12.—*S. glacialis* p. 261, *S. papposus* p. 263, MORTENSEN Medd. Grönl. 45.

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A. platytata sp. n. N. Pacific, CLARK H. L. U. S. Nation. Mus. Bull. 75 p. 171 fig. 76.

Amphilimna pentacantha sp. n. N. Pacific, CLARK T.c. p. 172 fig. 77.

Amphiobia occidentalis p. 155, *A. urtica* p. 154 fig. 64, CLARK, H. L. T.c.

A. ancistrola p. 161 fig. 69, *A. craterodonta* p. 155 fig. 65, *A. digitula* p. 162 fig. 70, *A. euryaspis* p. 158 fig. 67, *A. macraspis* p. 157 fig. 66, *A. periercta* p. 160 fig. 68, *A. psilochora* p. 165 fig. 72, *A. strongyloplax* p. 164 fig. 71, spp. n., N. Pacific, CLARK H. L. T.c.

Amphioplus acanthinus p. 168 fig. 75, *A. hexacanthus* p. 170, *A. megapomus* p. 170, *A. rhadinobranchius* p. 167 fig. 74, spp. n., N. Pacific, CLARK H. L. T.c.

Amphipholis pugetana, CLARK H. L. T.c. p. 166 fig. 73.

Amphiura bellis p. 140, *A. diomedea* p. 140, *A. sundevalli* p. 141, CLARK H. L. T.c.—*A. chiajei* p. 253, *A. elegans* p. 253, *A. filiformis* p. 255, SÜSSBACH & BRECKNER Wiss. Meeresunters. 12.—*A. sundevalli*, MORTENSEN Medd. Grøn. 45 p. 273.

A. acrostata p. 145 fig. 58, *A. carchara* p. 142 fig. 55, *A. ecomiotata* p. 148 fig. 59, *A. euopla* p. 144, *A. leptodoma* p. 143 fig. 56, *A. micraspis* p. 150 fig. 61, *A. psilopora* p. 153 fig. 63, *A. pycnostoma* p. 151 fig. 62, *A. trachydica* p. 149 fig. 60, spp. n., N. Pacific, CLARK H. L. U. S. Nation. Mus. Bull. 75.—*A. algida* sp. n. Cape Royds, KOEHLER Brit. Antart. Exped. 2 p. 46 pl. vii figs. 14 & 15.—*A. bananensis* p. 14 pl. ii figs. 3-4, *A. resecta* p. 16 pl. ii figs. 10-12, spp. n., W. Africa, KOEHLER Ann. Inst. Océan. Paris 2.—*A. joubini* sp. n. [nom. nud.] Antarctic, KOEHLER Paris C. R. Acad. Sci. 153 p. 736.

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Asteropora hadracantha sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 280 fig. 142.

Astroboa gen. n. type *Astrophyton clavatum* Lyman pp. 50 & 79, *A. clavata* p. 80 pl. v fig. 6, *A. globifera*

p. 51 pl. ii figs. 8 & 9 pl. vii fig. 7, *A. nuda* p. 86, DÖDERLEIN München Abh. Ak. Wiss. 2 (5).

A. ernae p. 82 pl. ix fig. 7, *A. nigra* p. 83 pl. ix fig. 9, spp. n., Japan, DÖDERLEIN T.c.

Astrocanium gen. n. of *Astrophytidae* p. 92, *A. spinosum* (type) p. 92 pl. viii figs. 4 & 5, *A. panamense* p. 95 pl. viii fig. 3, DÖDERLEIN T.c.

Astroceras pergamena, DÖDERLEIN T.c. p. 61 pl. vi fig. 4 pl. vii fig. 13; CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 284.

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Astrochele laevis sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 281 fig. 143.

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Astrocladus coniferus p. 46 pl. ii fig. 7 pl. iv figs. 1-3 pl. vii figs. 5 & 16, *A. dofeini* p. 41 pl. ii fig. 6 pl. iii figs. 1-4 pl. iv figs. 4 & 5 pl. vii fig. 15, *A. exiguus* p. 76 pl. ix fig. 6, DÖDERLEIN München Abh. Ak. Wiss. 2 (5).

A. tonganus sp. n. Japan, DÖDERLEIN T.c. p. 77 pl. ix fig. 8.

Astroclon suensoni sp. n. Off Japan, MORTENSEN Nath. Medd. 63 p. 209.

Astroconus gen. n. p. 36 incl. *Astrophyton australe* Verrill p. 37 pl. v fig. 2 p. 71 pl. ix fig. 2, DÖDERLEIN München Abh. Ak. Wiss. 2 (5).

Astrocyclus gen. n. for *Astrophyton caecilia* Lütken, DÖDERLEIN T.c. p. 55 & 89.

Astrodactylus gen. n. for *Astrophyton sculptum* pp. 56 & 91, *A. robillardii* p. 96, DÖDERLEIN T.c.

Astrodendrum gen. n. for *Gorgonocephalus sagaminus*, DÖDERLEIN T.c. p. 38 pl. ii figs. 3-5 pl. vii fig. 8 p. 71 pl. viii fig. 6.

Astrogordius gen. n. for *Gorgonocephalus cacaoticus* Lyman, DÖDERLEIN T.c. pp. 54 & 88.

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Astroporpa annulata, DÖDERLEIN T.c. p. 24.

Astroraphis gen. n. für *Astrophyton nudum* Lyman p. 54 but regarded as syn. of *Astroboa* p. 86, DÖDERLEIN T.c.

Astroschema p. 56, *A. japonicus* p. 58 pl. vi fig. 7 pl. vii fig. 11, DÖDERLEIN T.c.

A. enoshimanum p. 60 pl. vi fig. 8, *A. glutinosum* p. 59 pl. vi fig. 5 pl. vii fig. 9, *A. monacanthum* p. 58 pl. vi fig. 9, *A. sagaminum* p. 60 pl. vi fig. 6 pl. vii fig. 10, spp. n., Japan, DÖDERLEIN T.c.

Astrospartus gen. n. for *Gorgonocephalus arborescens* Lyman p. 50, *A. mucronatus* p. 73 pl. ix fig. 1, DÖDERLEIN T.c.

Astrothorax gen. n. (*Astrochelinae*), *A. misakiensis* sp. n. Japan, DÖDERLEIN T.c. p. 24 pl. vi fig. 2 pl. vii fig. 12.

Astrotoma murrayi, DÖDERLEIN T.c. p. 23 pl. vi fig. 1 pl. vii fig. 14.

Conocladus p. 37, *C. amblyconus* p. 70 pl. ix fig. 4, *C. oxyconus* p. 69 pl. ix fig. 3, DÖDERLEIN T.c.

Euryala aspera, DÖDERLEIN T.c. pp. 65 & 98.

Euryale anopla sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 294 fig. 144.

Gorgonocephalinae, DÖDERLEIN München Abh. Ak. Wiss. 2 (5) p. 26.

Gorgonocephalus, list of spp., p. 29, *G. japonicus* p. 31 pl. i figs. 1-3 pl. vii figs. 1 & 2, *G. tuberosus* p. 33 pl. ii figs. 1 & 2, DÖDERLEIN T.c.—*G. caryi* p. 287, *G. sagaminus* p. 292, CLARK, H. L., U. S. Nation. Mus. Bull. 75.—*G. eucnemis*, GRIEG Campagne Duc d'Orléans 1910 p. 6 pl. i figs. 2 & 3; MORTENSEN Medd. Grøn. 45 p. 275.

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O. acanthinotata p. 203 fig. 94, *O. adiaphora* p. 199 fig. 91, *O. anchilabra* p. 204 fig. 95, *O. atopostoma* p. 228 fig. 107, *O. bathybia* p. 233 fig. 110, *O. cataleimnoida* p. 217 fig. 100, *O. diplasia* p. 209 fig. 97, *O. diploa* p. 207, *O. enneactis* p. 211 fig. 98, *O. euphyllactea* p. 225 fig. 105, *O. eurypona* p. 223 fig. 103, *O. hylacantha* p. 227 fig. 106, *O. lambda* p. 231 fig. 108, *O. lepidota* p. 224 fig. 104, *O. leucorhabdota* p. 221 fig. 102, *O. leucosticta* p. 235 fig. 111, *O. lophobrachia* p. 232 fig. 109, *O. macrarthra* p. 236 fig. 112, *O. megatrete* p. 237 fig. 113, *O. oedidisca* p. 219 fig. 101, *O. omoplate* p. 202 fig. 93, *O. prionota* p. 213 fig. 99, *O. rhacophora* p. 201 fig. 92, *O. trachybactra* p. 206 fig. 96, spp. n., N. Pacific, CLARK, H. L., T.c.

Ophiactis ballii, SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 252.—*O. savignyi*, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 159.

O. africana sp. n. W. Africa, KOEHLER Ann. Inst. Océan. Paris 2 p. 17 pl. iii figs. 4-5.—*O. brachyaspis* p. 138 fig. 53, *O. brachygenys* p. 135 fig. 51, *O. dyscrita* p. 137 fig. 52, *O. gymnochora* p. 139 fig. 54, *O. pteropoma* p. 134 fig. 50, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.

Ophiambix aculeatus, CLARK, H. L., T.c. p. 114.

Ophiarachnella gorgonia, CLARK, H. L., T.c. p. 25.

O. megalaspis sp. n. N. Pacific, CLARK, H. L., T.c. p. 25 fig. 2.

Ophiernus adspersus, CLARK, H. L., T.c. p. 95 fig. 34.

Ophiobyrsa acanthinobrachia p. 269 fig. 134, *O. synaptacantha* p. 270 fig. 135, spp. n., N. Pacific, CLARK, H. L., T.c.

Ophiocamax lithosora p. 191 fig. 89, *O. polyplaca* p. 193 fig. 90, spp. n., N. Pacific, CLARK, H. L., T.c.

Ophiocampis pellucida, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 165.

Ophiochiton fastigatus, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 133.

Ophiocoma brevipes p. 256, *O. erinacea* p. 257, CLARK, H. L., T.c.—*O. brevipes*, BENHAM Trans. N. Zealand Inst. 43 p. 153.—*O. nigra*, SÜSSBACH &

BRECKNER Wiss. Meersunters. 12 p. 260.—*O. scolopendrina*, *O. valenciae*, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 160.

Ophioconis diastata p. 27 fig. 3, *O. papillata* p. 28 fig. 4, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.

Ophiocnemis marmorata, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 166.

Ophiocnida brachiata, SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 258.

Ophiocrasis gen. n. near *Ophionereis*, *O. dictydisca* sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 175 fig. 79.

Ophiocreas oedipus, CLARK, H. L., T.c. p. 283.

Ophiocten pacificum, CLARK, H. L., T.c. p. 96.—*O. scriceum*, MORTENSEN Medd. Grøn. 45 p. 272.

O. brevispinum p. 98 fig. 36, *O. charischema* p. 97 fig. 35, *O. oöplax* p. 99 fig. 37, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.

Ophiocynodus gen. n. near *Ophiomyxa*, *O. corynetes* sp. n. N. Pacific, CLARK, H. L., T.c. p. 274 fig. 138.

Ophiodioplax gen. n. near *Ophiacantha*, *O. disjuncta* sp. n. Cape Royds, KOEHLER Brit. Antarct. Exped. 2 p. 48 pl. vi figs. 9–11 pl. vii fig. 13.

Ophiodoris pericalles sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 177 fig. 80.

Ophioglypha brevispina p. 28 pl. i figs. 7 & 8, *O. hexactis* p. 29 pl. i figs. 5 & 6, KOEHLER Ann. Inst. Paris 3.—*O. robusta*, MORTENSEN Medd. Grøn. 45 p. 271 pl. xvi fig. 1.—*O. sinensis*, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 158.

O. flexibilis p. 44 pl. v figs. 1 & 2, *O. resistens* p. 42 pl. vii figs. 9–12 spp. n., Cape Royds, KOEHLER Brit. Antarct. Exped. 2.—*O. rouchi* sp. n. [nom. nud.] Antarctic, KOEHLER Paris C. R. Acad. Sci. 153 p. 736.

Ophiophymen gen. n. near *Ophiomyxa*, *O. gymnodiscus* sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 277 fig. 140.

Ophioteles asaphes p. 239 fig. 114, *O. brachygnatha* p. 240 fig. 115, *O.*

brevispina p. 247 fig. 120, *O. diaphora* p. 245 fig. 118, *O. pachybastra* p. 242 fig. 116, *O. paucispina* p. 246, *O. tylota* p. 243 fig. 117, spp. n., N. Pacific, CLARK, H. L., T.c.

†*Ophioteles damesii*, HORWOOD Geol. Mag. London 8 p. 520.

Ophioteptoplax gen. n. near *Ophiocyzygus*, *O. megapora* sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 278 fig. 141.

Ophiologimus gen. n. near *Ophiocolax*, *O. hexactis* sp. n. N. Pacific, CLARK, H. L., T.c. p. 252 fig. 123.

Ophiomastix mixta, CLARK, H. L., T.c. p. 256 fig. 126.—*O. venosa*, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 161.

Ophiomitra acanthophora p. 190 fig. 88, *O. bythiaspis* p. 185 fig. 85, *O. cardiomorphia* p. 179 fig. 81, *O. codonomorpha* p. 188 fig. 87, *O. discycla* p. 181 fig. 82, *O. habrotata* p. 182 fig. 83, *O. microphylax* p. 184 fig. 84, *O. polyacantha* p. 187 fig. 86, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.

Ophiomusium cancellatum p. 106, *O. jolliensis* p. 111 fig. 41, *O. laqueatum* p. 106, *O. lunare* p. 107, *O. lütkeni* p. 107, *O. lymani* p. 107, *O. simplex* p. 109, CLARK, H. L., T.c.

O. multispinum p. 113 fig. 42, *O. trychnum* p. 109 fig. 40, spp. n., N. Pacific, CLARK, H. L., T.c.

Ophiomyxa australis, CLARK, H. L., T.c. p. 271.

O. anisacantha sp. n. N. Pacific, CLARK, H. L., T.c. p. 271 fig. 136.

Ophionereis eurybrachioplax sp. n. N. Pacific, CLARK, H. L., T.c. p. 173 fig. 78.

Ophiopenia gen. n. near *Ophiostoma*, type *O. disacantha* p. 102, *O. disacantha* p. 102 fig. 38, *O. tetracantha* p. 104 fig. 39, spp. n., N. Pacific, CLARK, H. L., T.c.

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Ophiopholis revised, *O. aculeata* p. 128 fig. 48, *O. aculeata* var. *japonica* p. 123 fig. 47, var. *kennedyi* p. 132 fig. 49, *O. bakeri* p. 121 fig. 46, *O. mirabilis* p. 117 fig. 43, CLARK, H. L., U. S. Nation. Mus. Bull. 75.—*O.*

aculeata, SÜSSBACH & BRECKNER Wiss. Meersunters. 12.

O. brachyactis p. 117 fig. 44, *O. longispina* p. 119 fig. 45, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.

Ophiophrixus gen. n. near *Ophiomyra*, *O. acanthinus* sp. n. N. Pacific, CLARK, H. L., T.c. p. 272 fig. 137.

Ophiophrura gen. n. near *Ophiacantha*, *O. lio-disca* sp. n. N. Pacific, CLARK, H. L., T.c. p. 249 fig. 121.

Ophiopleura borealis, GRIEG Campaigne Duc d'Orléans 1910 p. 2 pl. i fig. 1; MORTENSEN Medd. Grøn. 45 p. 271 pl. xiii figs. 7 & 8.

Ophioplocus japonicus sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 30 fig. 5.

Ophiopteris papillosa, CLARK, H. L., T.c. p. 257.

Ophiopteron gymnatum sp. n. Mergui Archipelago, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18 p. 167 figs.

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Ophioschiza gen. n. of *Cladophiuræ*, *O. monacantha* sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 254 fig. 125.

Ophiocollex glacialis, GRIEG Invert. du fond Grønland p. 556; MORTENSEN Medd. Grøn. 45 p. 274; SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 259.

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Ophiostyracium gen. n. near *Ophiocollex*, *O. trachyacanthum* sp. n. N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75 p. 253 fig. 124.

Ophiostyzygus gen. n. near *Ophiocynodus*, *O. disacanthus* sp. n. N. Pacific, CLARK, H. L., T.c. p. 275 fig. 139.

Ophiothrix ciliaris p. 257, *O. koreana* p. 257 figs. 127 & 128, *O. longipeda* p. 263, *O. spiculata* p. 262 fig. 129, CLARK, H. L., T.c.—*O. exigua* p. 164, *O. foveolata* p. 161, *O. hirsuta* p. 164, *O. martensi* p. 162, *O. stelligera* p. 163, M'INTOSH Edinburgh Proc. R. Phys. Soc. 18.—*O. fragilis*, SÜSSBACH & BRECKNER Wiss. Meersunters. 12 p. 260.

O. congensis p. 21 pl. i figs. 5–7 pl. ii fig. 15, *O. gracilis* p. 19 pl. i figs. 1–4, spp. n., W. Africa, KOEHLER Ann. Inst. Océan. Paris 2.—*O. eusteira* p. 265 fig. 132, *O. lyloides* p. 263 fig. 130, *O. macrobrachia* p. 267 fig. 133, *O. pachyendyta* p. 264 fig. 131, spp. n., N. Pacific, CLARK, H. L., U. S. Nation. Mus. Bull. 75.—*O. oliveri* sp. n. Kermadec Islands, BENHAM Trans. N. Zealand Inst. 43 p. 154 figs. 14–17.

Ophiotrochus longispinus sp. n. N. Pacific, CLARK H. L. U. S. Nation. Mus. Bull. 75 p. 94 fig. 33.

Ophiozona longispina p. 33, *O. projecta* p. 36, CLARK H. L. T.c.

O. elevata p. 31 fig. 6, *O. platydisca* p. 34 fig. 7, *O. polyplax* p. 35 fig. 8, spp. n., N. Pacific, CLARK H. L. T.c.

Ophiura affinis p. 244, *O. albida* p. 241, *O. ciliaris* p. 238, *O. robusta* p. 247, *O. sarsi* p. 248, SÜSSBACH & BRECKNER Wiss. Meersunters. 12.—*O. flagellata* p. 60, *O. imbecillis* p. 62, *O. irrorata* p. 62, *O. kinbergi* p. 37, *O. lütkeni* p. 45, *O. maculata* p. 49, *O. nodosa* p. 70, *O. ponderosa* p. 77, *O. sarsii* p. 37, *O. sculpta* p. 73, *O. sculptilis* p. 77, *O. stercora* p. 75, *O. stuwitzii* p. 73, CLARK H. L. U. S. Nation. Mus. Bull. 75.—*O. griegi*, a variety of *O. sarsi*, GRIEG Nyt. Mag. Naturw. Kristiania 49 p. 49.

O. atacta p. 85 fig. 27, *O. bathybia* p. 58 fig. 14, *O. brachyactis* p. 87 fig. 28, *O. calyptolepis* p. 67 fig. 18, *O. clasta* p. 64 fig. 16, *O. cryptolepis* p. 69 fig. 19, *O. glyptodisca* p. 91 fig. 31, *O. hadra* p. 80 fig. 24, *O. leptoctenia* p. 51 fig. 12, *O. megapoma* p. 79 fig. 23, *O. micracantha* p. 47 fig. 10, *O. monostoecha* p. 65 fig. 17, *O. oediplax* p. 74 fig. 21, *O. penickra* p. 84 fig. 26, *O. pomphophora* p. 89 fig. 29, *O. quadrispina* p. 55 fig. 13, *O. stiphra* p. 82 fig. 25, spp. n., N. Pacific, CLARK H. L. U. S. Nation. Mus. Bull. 75.—*O. kermadecensis* sp. n. Kermadec Islands, BENHAM Trans. N. Zealand Inst. 43 p. 156 figs. 18–23.

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Pectinura anchista sp. n. N. Pacific, CLARK H. L. T.c. p. 23 fig. 1.

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Actinometra p. 69, *A. cheltonensis* p. 79, *A. nobilis* pl. vi figs. 9-11, *A. paucicirra* pl. v figs. 10-12, KIRK U. S. Nation. Mus. Proc. 41.

†*Agassizocrinus* p. 107, †*A. dactyliiformis* pl. x fig. 5, KIRK T.c.

Amphimetra discoidea, CLARK A. H. Fauna Südwest-Australiens 3 p. 459. —*A. molleri* p. 181, *A. planiformis* p. 182, CLARK A. H. Notes Mus. Jentink 33.

A. africana sp. n. E. Africa, CLARK A. H. U. S. Nation. Mus. Proc. 40 p. 20.

†*Ancyrocrinus* dist. from *Myrtillocrinus* p. 46, †*A. bulbosus* pl. v fig. 9, KIRK U. S. Nation. Mus. Proc. 41.

Antedon p. 68, *A. incerta* pl. vii fig. 6, *A. laticirra* pl. viii figs. 1 & 2, *A. multispina* pl. vii figs. 8-10, *A. phalangium* pl. vii fig. 6, *A. tuberosa* pl. vii fig. 7, KIRK T.c.—*A. bifida* p. 38, *A. huxperi* p. 40, *A. mediterranea* p. 39, CLARK A. H. U. S. Nation. Mus. Proc. 40—*A. bifida* p. 190, *A.*

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†*Apiocrinus elegans* pl. vi fig. 8, †*A. roissyanus* pl. vi fig. 7, KIRK U. S. Nation. Mus. Proc. 41.—†*A. parkinsoni* p. 33 fig. 171, †*A. roissyi* p. 46 fig. 233, THIÉRY Bul. soc. sci. Haute-Marne 7.

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†*B. bacillus* p. 31 pl. iv figs. 19 & 20, †*B. elegans* p. 31 pl. iv fig. 18, †*B. fritillus* p. 30 pl. iv figs. 14-17, †*B. papilliformis* p. 31, spp. n., Upper Chalk Hants, GRIFFITH & BRYDONE T.c.

†*Brachiocrinus* p. 48, †*B. nodosarius* pl. v fig. 8, KIRK U. S. Nation. Mus. Proc. 41.

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Comantheria alternans, CLARK A. H. Notes Mus. Jentink 33 p. 178.

Comanthina schlegelii, CLARK A. H. T.c. p. 179.

Comanthus bennetti, *C. japonica*, p. 180, *C. parvicirra* p. 181, CLARK A. H. T.c. 33.—*C. (Comantheria) briareus* p. 454, *C. (Comanthina) belli* p. 455, *C. (Bennettia) trichoptera* p. 456, *C. (Vania) annulata* p. 457, CLARK A. H. Fauna Südwest-Australiens 3.—*C. parvicirra*, CLARK A. H. Bul. Muséum Paris 1911 p. 249.—*C. (Validia) parvicirra*, CLARK A. H. U. S. Nation. Mus. Proc. 40 p. 18.

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Comaster fruticosus p. 532, *C. (?) horridus* p. 533, *C. (?) scitulus* p. 534,

spp. n., Philippine Is., CLARK A. H. Proc. U. S. Nation. Mus. 39.—*C. tavana* sp. n. Philippine Islands, CLARK A. H. Proc. U. S. Nation. Mus. 41 p. 172.

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Craspedometra ater p. 21, *C. madagascarensis* p. 23, spp. n., Africa, CLARK A. H. U. S. Nation. Mus. Proc. 40.

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Trans. Geol. Soc. Cornwall **13** p. 412.

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var. n., SPRINGER T.c. pl. iii figs. 8 & 9.

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†*Dimerocrinus* revised p. 117, †*D. spiniferus* sp. n. Hamilton Group Indiana p. 119 pl. iii fig. 11, SPRINGER Mem. Mus. Comp. Zool. **25**.

†*Dolatocrinus*, KIRK U. S. Nation. Mus. Proc. **41** p. 46.

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†*E. dispansus* sp. n. Silurian Tennessee, KIRK T.c. p. 112 pl. xi figs. 1 & 2.

†*Encrinus liliiformis*, THIÉRY Bul. Soc. Sci. Haute-Marne **7** p. 12 fig. 32.

~~†~~ *Endoxocrinus* gen. n. of *Pentacrinidae*, type is *Encrinus parrae* Gervais, CLARK Washington U. S. Nation. Mus. Proc. **35** p. 131.

†*Entrochus primus*, ŽELÍZKO Sborn. mest. hist. mus. Pizni **2** p. 2 fig. 1.

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†*Eudesicrinus* p. 114, †*E. mayalis* pl. xi figs. 3-5, KIRK T.c.

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†*Extracrinus babeau*, THIÉRY Bul. soc. sci. Haute-Marne **7** p. 28 fig. 136. —†*E. collenoti* p. 79 pl. v figs. 1-3, †*E. dargniesi* p. 79 pl. viii fig. 5, KIRK U. S. Nation. Mus. Proc. **41**.

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†*Gasterocomidae* revised, SPRINGER T.c. p. 122.

†*Glenotremites rosaceus*, FRIÖ Arch. Natw. LdDurchf. Böhmen **15** p. 77 fig. 321.

†*Glyptocrinus*, †*G. schafferi* is young of †*G. dyeri*, KIRK U. S. Nation. Mus. Proc. **41** p. 44.—†*G. basalis*, WADE London Q. J. Geol. Soc. **67** p. 429.

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†*Graphiocrinus encrinoides* SPRINGER Mem. Mus. Comp. Zool. **25** pl. v figs. 4 & 5.

†*Hapalocrinus*, KIRK U. S. Nation. Mus. Proc. **41** p. 58.

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Heliometra glacialis, MORTENSEN T.c. p. 241 pl. x fig. 1; CLARK A. H. Notes Mus. Jentink **33** p. 192.—*H. glacialis* var. *maxima*, CLARK A. H. U. S. Nation. Mus. Proc. **39** p. 488.

†*Herpetocrinus*, KIRK U. S. Nation. Mus. Proc. **41** p. 47.

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Holopus p. 114, *H. rangii* pl. xi fig. 10, KIRK U. S. Nation. Mus. Proc. **41**.

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Isocrinus, type is *I. pendulus* Meyer, subdiv. into subgenera *Cenocrinus* and *Isocrinus* s. str., CLARK U. S. Nation. Mus. Proc. 35 p. 131.—*I. alternicirrus* p. 33, *I. blakei* p. 37, *I. decorus* p. 33 pl. iv fig. 2, *I. maclearanus* pl. iv fig. 1, *I. parrae* p. 33, *I. wyvillethomsoni* p. 33 pl. v fig. 13, KIRK U. S. Nation. Mus. Proc. 41.

†*Lobolithus* is part of a *Scyphocrinus*, KIRK T.c. p. 56.

†*Mariocrinus paucidactylus*, †*M. warreni*, KIRK T.c. p. 43.

†*Marsupites*, systematic position, CLARK A. H. U. S. Nation. Mus. Proc. 40 p. 649.—†*M. testudinarius* pl. x fig. 4, KIRK U. S. Nation. Mus. Proc. 41.

†*M. americanus* sp. n. Upper Cretaceous Mississippi, SPRINGER Mem. Mus. Comp. Zool. 25 p. 160 pl. vi figs. 4 & 5.

†*Mastigocrinus*, †*M. loreus*, KIRK U. S. Nation. Mus. Proc. 41 p. 45.

†*Megistocrinus* p. 46, †*M. rugosus* pl. ix fig. 12, KIRK T.c.

†*Melocrinus milwaukeeensis* p. 40 pl. iii fig. 9, var. *rotundatus* p. 41 pl. iii fig. 8, †*M. nodosus* p. 38 pl. iii fig. 4, var. *spinosus* p. 39 pl. iii fig. 5, †*M. subglobosus* p. 39 pl. iii figs. 6 & 7, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21.

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Melacrinus, type is *M. wyvillii* Carpenter, CLARK U. S. Nation. Mus. Proc. 35 p. 130.—*M. angulatus* p. 33, *M. rotundus* p. 41, KIRK U. S. Nation. Mus. Proc. 41.—*M. rotundus*, CLARK A. H. U. S. Nation. Mus. Proc. 39 p. 487; CLARK A. H. Notes Mus. Jentink 33 p. 192.

†*Millericrinus beaumonti* p. 71 pl. vii fig. 2, †*M. charpyi* p. 71 pl. vii fig. 1, †*M. prattii* p. 48 pl. vi figs. 1-6, †*M. recubariensis* p. 71, KIRK U. S. Nation. Mus. Proc. 41.

†*Myrtillocrinus americanus* pl. iii fig. 8, †*M. ? levis* pl. iii fig. 9, SPRINGER Mem. Mus. Comp. Zool. 25.

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†*Pachyantodon beyrichi*, KIRK U. S. Nation. Mus. Proc. 41 p. 78.

Pachylometra distincta p. 555, *P. flexilis*, *P. patula*, *P. smithi*, p. 557, CLARK A. H. Proc. U. S. Nation. Mus. 39.

P. luna p. 556, *P. selene* p. 556, *P. septentrionalis* p. 554, spp. n., CLARK A. H. Proc. U. S. Nation. Mus. 39.

†*Parisocrinus subramosus*, SPRINGER Mem. Mus. Comp. Zool. 25 p. 157 pl. iv fig. 18.

†*Pentacrinus bajocensis* p. 28 fig. 135, †*P. basaltiformis* p. 25 fig. 117, †*P. scalaris* p. 21 fig. 88, THIÉRY Bul. soc. sci. Haute-Marne 7.—†*P. briareus* p. 39, †*P. dargniesi* p. 39, †*P. sorlinensis* p. 80, KIRK U. S. Nation. Mus. Proc. 41.—†*P. diaboli* p. 109 pl. i fig. 8, †*P. didactylus* p. 110 pl. i figs. 9 & 10, FABIANI Roma Mem. Soc. XL 15.—†*P. pusillus*, FRIÖ Arch. Natw. Ld.-Durchf. Böhmen 15 p. 77 fig. 322.—†*P. sp.* Danian Egypt, HUME London Q. J. Geol. Soc. 67 p. 127.

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Ptilometra macronema, CLARK A. H. Fauna Südwest-Australiens 3 p. 461.

†*Reteocrinus* p. 9, †*R. alveolatus* p. 10 pl. i figs. 1-5, †*R. stellaris* p. 10 pl. i figs. 6 & 7, SPRINGER Canada Geol. Surv. 1911 15.

Rhizocrinus, KIRK U. S. Nation. Mus. Proc. 41 p. 72.—*R. lofotensis*, CLARK A. H. Notes Mus. Jentink 33 p. 192.

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Thalassometra annandalei, CLARK A. H. T.c. p. 551.

T. hirsuta sp. n. Philippine Is., CLARK A. H. T.c. p. 552.

†*Thiolliericrinus* p. 75, †*T. flexuosus* p. 75 pl. vii figs. 4 & 5, †*T. heberti* p. 75 pl. vii fig. 3, KIRK U. S. Nation. Mus. Proc. 41.

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†*Anomalocystis* p. 22, †*A. cornutus* p. 22, †*A. disparilis* p. 22 pl. iii figs. 9-11, KIRK T.c.

†*Arachnocystis* p. 15, type is *A. infastus* p. 15 pl. ii figs. 5 & 6, KIRK T.c.

†*Aristocystis* p. 9, †*A. bohemicus* p. 6 pl. i figs. 1-10 KIRK T.c.

†*Aristocystites subcylindricus*, KIRK T.c. p. 9.

†*Ascocystis*, KIRK T.c. p. 16.

†*Ateleocystis* syn. of *Anomalocystis*, KIRK T.c. p. 22.

†*Cheirocrinus* p. 19, †*C. penniger* p. 20 pl. ii figs. 1 & 2, KIRK T.c.

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†*Craterina*, KIRK U. S. Nation. Mus. Proc. 41 p. 10.

†*Dendrocystis*, KIRK T.c. p. 18.

†*Echinoencrinus angulosus*, KIRK T.c. p. 19 pl. ii fig. 8.

†*Echinospaera* p. 5, †*E. aurantium* p. 5 pl. i fig. 3, KIRK T.c.

†*Erinocystis* p. 19, †*E. angulata* pl. ii fig. 9, †*E. volborthi* p. 19 pl. ii fig. 3, KIRK T.c.

†*Glyptocystis*, KIRK T.c. p. 16.

†*Lepadocrinus* p. 17, †*L. gebhardi* pl. v figs. 6 & 7, KIRK T.c.

†*Lichenoides* p. 109, †*L. priscus* pl. xi fig. 11, KIRK T.c.

†*Macrocytella* p. 16, †*M. mariae* pl. ii fig. 7, KIRK T.c.

†*Mitrocystis* p. 27, †*M. mitra* pl. iii figs. 6-8, KIRK T.c.

†*Orocystis*, *O. helmhackeri*, KIRK T.c. p. 10.

†*Placocystis* p. 24, †*P. forbesianus* pl. iii figs. 1 & 2, KIRK T.c.

†*Pleurocystis* p. 20, †*P. filitextus* p. 14 pl. ii fig. 4 pl. iii fig. 3, KIRK T.c.

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VI. VERMIDEA

ARRANGED BY

H. M. WOODCOCK.

CONTENTS

	PAGE
TITLES (for all groups)	3

PLATYHELMINTHIA, NEMERTINEA

SUBJECT INDEX:—

Comprehensive and General=1203	21
Structure=1207	22
Physiology=1211	23
Development=1215	23
Ethology=1219	24
Variation, Phylogeny=1223	26
Distribution (Geography)=1227	26

SYSTEMATIC=1231:—

Platyhelminthia	27
Turbellaria	27
Trematoda	28
Cestoda	32
Nemertinea	34

NEMATHELMINTHIA

SUBJECT INDEX:—

Comprehensive and General=1403	34
Structure=1407	35
Physiology=1411	35
Development=1415	36
Ethology=1419	36
Variation, Phylogeny=1423	37
Distribution (Geography)=1427	37

SYSTEMATIC=1431:—

Nematoda	37
Nematomorpha (Vacant)	
Acanthocephala	40

CHAETOGNATHA, GASTROTRICHA, ROTIFERA

PAGE

SUBJECT INDEX :—

Comprehensive and General=1603	..	..	..	..	40
Structure=1607	..	..	..	..	41
Physiology=1611	..	..	..	..	41
Development=1615	..	..	..	..	41
Ethology=1619	..	..	..	..	41
Variation, Phylogeny=1623 (Vacant)					
Distribution (Geography)=1627	..	..	..	..	41

SYSTEMATIC=1631 :—

Chaetognatha	..	..	..	..	..	42
Gastrotricha (Vacant)						
Rotifera	..	..	..	..	..	42

ANNELIDA, GEPHYREA, PTEROBRANCHIATA

SUBJECT INDEX :—

Comprehensive and General=1803	..	..	..	..	43
Structure=1807	..	..	..	..	43
Physiology=1811	..	..	..	..	44
Development=1815	..	..	..	..	44
Ethology=1819	..	..	..	..	45
Variation, Phylogeny=1823	..	..	..	..	46
Distribution (Geography)=1827	..	..	..	..	46

SYSTEMATIC=1831 :—

Annelida	..	..	..	..	..	47
Archiannelida (Vacant)						
Polychaeta	..	..	..	..	..	47
Myzostomida	..	..	..	..	..	51
Oligochaeta	..	..	..	..	..	51
Hirudinea	..	..	..	..	..	52
Echiuroidea (Vacant)						
Gephyrea	52
Phoronidea (Vacant)						
Pterobranchiata	52

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(358a).] 356

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den Bau des *Dicrocoelium* (*Distomum*)
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fera*.] 367

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Corrigendum Titles of 1910.

The Title 309 in Vol. 47 Verm. p. 16 gave a reference to the wrong work. The following should be substituted:—

Murray, James. Antarctic Rotifera [in] British Antarct. Exp. Vol. 1 Biology 1910 (41-76) pls. ix-xiii.

PLATYHELMINTHIA, NEMERTINEA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1203

Historical.

Historical records of intestinal worms in ancient times; Moulé, 252.

Historical review of the "gid" parasite of sheep (*Coenurus cerebralis*) and allied species; Hall, 144.

Bibliography.

Jahresbericht über Turbellaria für 1909; **Wilhelmi, 395.**

Jahresbericht über Nemertini für 1909; **Nägler, 265.**

Jahresbericht über Trematoda und Cestoda für 1909; **Fuhrmann, 105.**

Nomenclature.

Trematode generic names proposed for the "Official List"; **Stiles, 369.**

Economics.

RELATION TO DISEASE.

Trematoda.

Abnormal pigmentation of a whiting due to Trematode larvae (cf. *Holostomum cuticola*); **Gamble & Drew, 112**

Davainea madagascariensis in a Filipino; **Garrison, 113.**

Cestoda.

Echinococcosis ganglionnaire lymphatique chez le mouton; **Dévé, 70.**—Echinococcosis primitive hétérotopique des séreuses; **Dévé, 69.**

Plerocercoides prolifer, parasitismo in uomo; **Ariola, 4.**

METHOD OF INFECTION—TRANSMISSION.

Mode of infection with the liver Distome in Japan (*Clonorchis endemica*); **Kobayashi, 179.**

Mode of infection of rats and rat-fleas with *Hymenolepis diminuta* and *H. murina*; **Nicoll & Minchin, 268.**

On the mode of infection of fish with the Cercariae (*C. cristata*) of *Sanguinicola*; **Odhner, 277.**

Experimental infection of the sand shark (*Carcharias littoralis*) with the "*Scolex polymorphus*"; **Curtis, 60.**

Echinococcosis primitive expérimentale. La voie suivie par l'embryon pour arriver en foie; **Dévé, 67.**

Technique, Cultivation, etc.

Le diagnostic des épizooties parasitaires par l'examen microscopique des déjections; **Brumpt, 35.**

Killing solutions and stains for Trematoda; **Barker & Laughlin, 13.**

Cestode cells *in vitro*; **Morse, 251.**

STRUCTURE.

1207

General.

TURBELLARIA:—

Beschreibung von zwei pelagische Acölen des Golfes von Triest. (*Convoluta pelagica* und *Monochoerus illardatus*); **Löhner und Micoletzky, 216.**

Account of a new land Planarian, *Pseudartiocotylus ceylonicus* n. g., n. sp.; **Ikeda, 164.**

Anatomy of *Sorocelis* spp. n.; **Seidl, 335.**—Aeusserer und innerer Bau der Planarien (Gen. *Sorocelis*); **Zabusov, 398.**

Un nouveau Bdellouride (*Synsiphonium liouvillei* n. g., n. sp.) non parasite des mers antarctiques; **Hallez, 146.**

Weitere Beiträge zu den Doppelbildungen bei den Turbellarien (*Bothrioplana*); **Sekera, 336.**

TREMATODA:—

Bau von *Buddenbrockia plumatellae* (ein Trematode?); **Braem, 30.**

Account of new Reptilian Trematodes; **Nicoll, 266.**—Account of new Trematodes from American fresh-water fish; **Goldberger, 126.**

Beschreibung von Nordostafrikanischen Trematoden, mit neuen Formen; **Odhner, 281.**

Clonorchis endemicus (Bälz), characters of; **Kobayashi, 179.**

Morphology of the Trematode family *Cyclocoelidae*; **Kossack, 180.**

Note on *Davainea madagascariensis* from the Philippines; **Garrison, 113.**

Bau von *Dicrocoelium* (*Distomum*) *cirrigerum* Baer; **Solowiow, 358.**—Anomalien des Baues von *Fasciola hepatica*, *Dicrocoelium lanceolatum*, *Opisthorchis filineus* (Russ.); **Petrov, 288.**

Account of *Galactosomum cochleariforme* (Rudolphi); **Pratt, 295.**

Beitrag zur Anatomie und Histologie von *Nephrocephalus sessilis* Odhner; **Miestinger, 239.**

Morphology of *Notocotyle quinqueserialis* n. sp.; **Barker & Laughlin, 13.**

Description of a new Trematode, *Paracotyle caniculae*, n. g., n. sp.; **Johnstone, 174.**

Pneumonoeces asper Lss. and *P. schulzei* n. sp.; **Wundsch, 397a.**

Pronopharynx nematoides Cohn, der umgekehrte Hinterkörper einer Holostomide (wahrscheinlich *Holostomum* sp.); **Odhner, 280.**

Morphology of the genus *Sanguincola* Plehn, a digenetic Trematode; comparison with *Aporocotyle*; **Odhner, 277.**

Körpergestalt von *Schizostoma* [*Schistosoma*] *crassa* (Russ.); **Skriabin, 350.**

Account of the genus *Stilesia*; **Gough, 129.**

Anatomy of *Styphlodora bascaniensis* n. sp., with a blind Laurer-Stieda canal; **Goldberger, 125.**—Account of a new Reptilian Trematode, *Styphlodora condita* n. sp.; **de Faria, 81.**

New Trematodes of the genus *Telorchis*; **Goldberger, 127.**

Anatomie der Cercarien, Sporocysten und Redien aus Mollusken des Schwarzen Meeres (Russ.); **Sinicyan, 349.**

CESTODA:—

Description of new Mammalian Cestodes; **Beddard, 18.**

Account of new Avian Cestodes; **Johnston, 169.**

Anatomie der *Anoplocephala latissima* nom. n. (*Taenia magna* Murie); **Deiner, 64.**

Detailed account of the Cestode genus *Gyrocotyle* esp. *G. fimbriata* n. sp.; **Watson, 390.**—Zur Frage, wie die Cestoden (*Gyrocotyle*) zu orientieren sind; **Cohn, 55.**

Account of *Hymenolepis upsilon* n. sp.; **Rosseter, 315.**—Innere u. äussere Anatomie von *Hymenolepis villosoides* n. sp. (Russ.); **Solovjeff, 356.**

Notes on structure of *Phoreiobothrium trilocolatum*; **Curtis, 60.**

Anatomischer Bau von *Rhynchobothrius tetrabothrius* v. Ben.; **Zerny, 400.**

Description of a new Cestode, *Sphyrnocolaenia uncinata* n. g., n. sp.; **Ransom, 298.**

A new species of Cestode parasite (*Taenia balaniceps*) of the dog and of the lynx; **Hall, 145.**

Full account of the structure of *Tetrarhynchus erinaceus* Van Ben.; Johnstone, 173.

NEMERTINEA :—

Description of a new type of Nemer-
tine, *Paralineus* n.g. *coecus* (Timofej.);
Schütz, 326.

Excretory Organs.

L'appareil excréteur du *Bothriomolus constrictus*; sa comparaison avec celui du *Bothrioplana*; Hallez, 148.

L'appareil néphridien de deux Cer-
caires parasites de *Donax vittatus*
(*Cercaria pectinata* and *Gymnophallus somateriae*); Dollfus, 74 (text-figs.).

Nervous and Sensory Systems.

The central nervous system in
teratophthalmic and teratomorphic
forms of *Planaria dorocephala*; Child
& McKie, 44.

Sur les terminaisons nerveuses dans
l'épiderme des Planaires; Hallez, 149
(2 text-figs.).

Die sogenannten freien Nervenendi-
gungen bei Cestoden sind Parenchym-
zellen; Blochmann, 24.

Sexual Organs and Cells.

Caractère double des ovaires de
quelques Polyclades; Hallez, 147.

Presence of a lateral spine in eggs
of *Schistosoma japonicum*; Leiper, 202.
—Absence of spines on the ova of
Schistosoma japonicum; Woolley &
Huffman, 397.

Histology, Cytology.

Nematocysts of the Turbellarian
Microstoma are derived from ingested
Hydrae, and transported to the surface
of the worm; Kepner, 176.

Histology of *Avitellina* (*Stilesia*)
centripunctata (Riv.); Gough, 129.

Presence of cuticular spines a normal
character in *Fasciolopsis*; Leiper, 199.

Die sogenannten freien Nervenendi-
gungen bei Cestoden sind Parenchym-
zellen; Blochmann, 24.

The occurrence of amitosis in *Mo-
niezia*; Child, 38.—The method of
cell-division in *Moniezia*; Child, 39.

PHYSIOLOGY.

1211

General.

Analyse biologique d'une série d'ex-
périences concernant l'avènement de la
maturité sexuelle, la régénération et
l'inanition chez les Némertiens *Lineus*
ruber et *lacteus*; Oxner, 284.

Nutrition, Excretion.

Ueber die Einwirkung des Hungers
auf Planarien; Berninger, 20.

Zum Exkretionsproblem der Acölen.
Zugleich ein Beitrag zur Theorie der
Vitalfärbung; Löhner, 214.

Regeneration.

Physiological dominance of anterior
over posterior regions in the regulation
of *Planaria dorocephala*; Child, 41
(21 text-figs.).

Senescence.

A study of senescence and rejuven-
escence based on experiments with
Planaria dorocephala; Child, 43.

Various Functions.

Protective function of the ingested
and transported nematocysts of *Micro-
stoma*; Kepner, 176.

Double fonction des ovaires de
quelques Polyclades; Hallez, 147.

Effects of Chemical Reagents, &c.

Action du cyanure de potassium sur
les *Convoluta* exposés à la lumière;
résistance de *C.* à l'inhibition des
oxydations par le cyanure de potas-
sium; Drzewina, 76.—and Drzewina
& Bohn, 77.

REPRODUCTION.

1215

General, Life-Cycle.

Life-history of *Acanthopsolus lageni-
formis* n. sp.; Lebour, 186.—Notes on
life-history of *Ligula*; Gemmill, 114.

Generationswechsel der Trematoden
(Russ.); Sinicyn, 349.

Cestodi degli Uccelli acquatici: ciclo
biologico; Monticelli, 242.

Notes on the cysts of *Tetrarhynchus*
unionifactor in the oyster; Southwell,
362.

Fortpflanzung von *Buddenbrockia plumatellae*; Braem, 30.

Regeneration.

Studies on the dynamics of morphogenesis in experimental reproduction: the formation of new zooids in *Planaria* and *Stenostomum*; Child, 41 (36 figs.).—The axial gradient in *Planaria dorotocephala* as a limiting factor in regulation; Child, 40.

Experimental control of morphogenesis in the regulation of *Planaria (dorotocephala)*; Child, 42.

Minimal size reduction in Planarians through successive regenerations; Holmes, 158.

Regeneration of Nemerteans and *Amphitrite*; Ives, 165.

Weitere Studien über die Regeneration der Nemertinen. I. Regeneration bei *Lineus ruber* Müll; Nusbaum und Oxner, 273.—Die Bildung des ganzen neuen Darmkanals durch Wanderzellen mesodermalen Ursprunges bei der Kopfrestitution des *Lineus lacteus* (Grube); Nusbaum und Oxner, 272.

Analyse biologique d'une série d'expériences concernant l'avènement de la maturité sexuelle et la régénération chez les Némertiens *Lineus ruber* et *L. lacteus* Rathke; Oxner, 284.

Spermatogenesis, Oogenesis, etc.

Ovogenese, Eireifung und Befruchtung von *Fasciola hepatica*; Schellenberg, 322.

Entwicklung und Form der Geschlechtsprodukte; Reifung und Befruchtung bei der Nemertine *Malacobdella grossa* (Müll.); Gering, 118.

Noch ein Wort über die frühzeitige Besamung der Eizellen bei *Otomesostoma auditivum*; Hofsten, 157.

Development.

Notes and sketches (by Looss) on the development and early phases of the life-cycle in *Sanguinicola*; Odhner, 277.

Development of the eggs in *Schistosoma haematobium*; comparison with allied species; Looss, 218.

Size and form of the young *Echinococci* at different periods in the development of the hydatid cyst; Dédé, 67.

Histogenesis.

Cell-division in the development of the female organs of the Cestode, *Moniezia*; Richards, 302.

Larval forms.

Larvae of *Clinostomum complanatum*; Ciurea, 46c.

Clonorchis endemicus, young encysted forms in several freshwater fishes; Kobayashi, 179.

Notes on the rediae and cercariae of *Echinostomum secundum*; Lebour, 184.

"*Scolex polymorphus*" is probably the larval form of *Phoreiobothrium trilocolatum*; Curtis, 60.

The Plerocercoid larva of *Tetrarhynchus erinaceus*; Johnstone, 173.

ETHOLOGY. 1219

Biology: Behaviour and Habits.

Notes on the biology of *Tetrarhynchus unionifactor*, the pearl-inducing Cestode; Southwell, 362.—Wie aus Würmern Perlen werden: *Tetrarhynchus unionifactor* als Perlenerzeuger; Pintner, 291.

Beiträge zur Kenntnis von *Malacobdella grossa* (Müll.) (Benutzung des Rüssels, u.s.o.); Gering, 118.

Notes on the habits and bionomics of Triclads, with especial reference to the Swiss forms; Steinmann, 363.

Behaviour of the Trematode, *Clinostomum marginatum* upon liberation from the cysts; Osborn, 283.

Behaviour of Cestode cells, cultivated *in vitro*; Morse, 251.

Concerning the nematocysts of *Microstoma* [criticism of paper by Kepner]; Glaser, 123.—[Reply to same]; Kepner, 177.

Plankton.

Gulf of Trieste and Quarnero, two new pelagic Acoela, *Convoluta pelagica* and *Monchoeris illardatus*; Löhner & Micoletzky, 215.

Parasitism.

Register der Trematoden und Cestoden Deutschlands, geordnet nach ihren Wirthen; Lühe, 221.

New Trematodes of the genus *Telorchis*; Goldberger, 127.

A preliminary report on the source of the human liver Distome, *Clonorchis endemicus* (Bälz) (= *Distomum spathulatum* Leuckart); Kobayashi, 179.

Hosts of *Echinostomum secundum* at various stages of the life-history; Lebour, 184.

Deux Trématodes marins des environs d'Alger; Seurat, 342.

British edible shell-fish as hosts of *Cercariae*; Lebour, 185.

In Mollusken parasitierende Trematoden, Infektionsweise, Zwischenwirte etc. (Russ.); Sinicyn, 349.

In rat-flea (*Ceratophyllus fasciatus*), body-cavity, Cysticercoids of *Hymenolepis diminuta* and *H. murina* (?); Nicoll & Minchin, 268.

Trematodes of fishes, Northumberland coast, with new forms; Lebour, 187.

Trematodes ectoparasitic on British fish; Scott, 332.—Trematode parasites of fishes, Scotland; Scott, 333.

Trematodes from American freshwater fish; Goldberger, 126.

Cestodes in sharks, Woods Hole region, Bermudas, etc., and in the butter-fish (*Poronotus triacanthus*); Linton, 211.

Trematode and Cestode parasites occurring in fishes from the Baltic; Schultz, 328.

Fischparasiten aus dem Ladoga-See; Jääskeläinen, 167.

Trematode and Cestode parasites of fishes (Lake of Lucerne); Nufer, 271.

Hosts (*Anarrhichas lupus* and *Buccinum undatum*) of *Acanthopsoles lageniformis* n. sp.; Lebour, 186.

Sur la présence chez l'aiguillat de *Tetrarhynchus megacephalus* Rud.; Seurat, 341.

Ectoparasitism on common dog-fish. gill-slits, a new Trematode, *Paracotyle caniculae*; Johnstone, 174.

In *Chimaera collici*, spiral valve, *Gyrocotyle fimbriata* n. sp.; Watson, 390.

In *Eucitharus linguatula* (Naples), intestine, a new Bothriocephalid (*B. andresi*); Porta, 293.

In *Perca fluviatilis* (Danube) muscles and branchial cavity, *Clinostomum complanatum* (larvae); Ciurea, 46c.

In whiting, British waters, larvae of *Holostomum cuticola* v. Nordm.; Gamble & Drew, 112.

New Cestodes of the family *Proteocephalidae*, from fishes and reptiles; La Rue, 183.

In fish and reptiles, North-East Africa, mostly from the White Nile, new Trematodes; Odhner, 281.

Piscine, Amphibian and Avian hosts of the Trematode *Clinostomum marginatum*, and its geographical occurrence; Osborn, 283.

New Reptilian Trematodes; Nicoll, 266.

In Nicaraguan turtle (*Chelone mydas*), alimentary canal, a new Monostomid, *Desmogonius desmogonius*; Stephens, 364.

In liver of *Bascanion constrictor*, *Styphlodora bascaniensis* n. sp.; Goldberger, 125.

In black snake (*Pseudechis porphyriacus*), *Proteocephalus* (*Ichthyotaenia*) *gallardi* n. sp.; Johnston, 172.

In a Brazil snake, *Spilotes pullatus*, ureters, *Styphlodora condita* n. sp.; de Faria, 81.

Trematode and Cestode parasites of Australian birds; Johnston, 170.—New Avian Cestodes; Johnston, 169.

Vogeltänien Mittelrusslands mit neuen Formen; Neslobinsky, 265a.

Cestoden der Vögel des Urals; Clerc, 48.—Cestoden aus Vögeln; Solovjeff, 356 & 358a.

New Avian Cestodes from the Aru islands; Fuhrmann, 104.

In *Anas boschas*, intestine, *Hymenolepis upsilon* n. sp.; Rosseter, 315.

New Trematodes from the Soudan: *Balfouria monogama* n. g., n. sp. from Marabou stork (*Leptoptilus crumeni-*

ferus, intestinal mucosa, and *Gastrothylax wenyoni* n. sp. from a water-buck (*Cobus maria*), stomach; **Leiper**, 194.

Monostoma faja on *Passer domesticus*, Wisconsin; **Cole**, 56.

Taenia mediocanellata Parasit von *Otis tarda*; **Mozgalevski**, 253.

In an African bustard, *Neotis capra*, intestine, a new Cestode, *Sphyrnco-taenia uncinata* n. g., n. sp.; **Ransom**, 298.

New Cestodes from Mammals; **Beddard**, 18.

In black wallaby (*Macropus ualabatus*), intestine, a new Cestode, *Bancroftiella tenuis* n. g., n. sp.; **Johnston**, 171.

Cestode parasites of Australian Monotremata and Marsupialia; **Johnston** 171.

Notocotyle quinqueserialis n. sp., from the musk-rat (*Fiber zibethicus*), Nebraska; **Barker & Laughlin**, 13.

In dog and lynx, intestine, *Taenia balaniceps* n. sp.; **Hall**, 145.

Cestodes de deux genettes capturées en Tunisie; **Weiss**, 392.

In der Leberpfortader von *Bos taurus*, *Schizostoma* [*Schistosoma*] *crassa*; **Skriabin**, 350.

Echinococcose ganglionnaire lymphatique chez le mouton; **Dévé**, 70.

Über die tierischen Parasiten der Rothirsche (*Cervus elaphus* L.) von Rominten (Ostpreussen); **Braun**, 31.

In camel (India), mesenteric and other veins, *Schistosoma indica*; **Leese**, 190.

Athesmia foxi n. sp., from *Cebus capucinus*; **Goldberger & Crane**, 128.

Echinostomum (*Fascioletta*) *ilocanum* (Garrison), ein neuer Menschenparasit aus Ostasien; **Odhner**, 278.

(*Taenia*) *Echinococcus hominis* einheimisch in Schweden; **Simon**, 348.

Kyste hydatique et terrain (général et local): localisations électives des kystes et affinités biologiques du parasite; **Dévé**, 68.

VARIATION, PHYLOGENY.

1223

Inheritance and Variation.

Inheritance in the "regulation" of *Planaria dorotocephala*; **Child**, 40.

The production of teratophthalmic and teratomorphic forms of *Planaria dorotocephala*; **Child & McKie**, 44.

Variation in character and position of the spine in eggs of *Schistosoma haematobium*: evidence in support of independent nature of *S. mansoni*; **Leiper**, 202.

Abweichung im Bau einiger Disto-men (Russ.); **Petrov**, 288.

Weitere Beiträge zu den Doppelbildungen bei den Turbellarien (*Bothrioplana*); **Sekera**, 336.

Phylogeny.

Ssinitzins „Studien über die Phylogenie der Trematoden“; **Odhner**, 275.

Phylogenie der Cestoden im Zusammenhang mit der Phylogenie ihrer Wirtstiere (Aves) (Russ.); **Solovjeff**, 356.

DISTRIBUTION.

1227

(*Vide etiam* Ethology.)

Europe.

Ireland (Glasnevin), the land Planarian *Dolichoplana fieldeni*, v. Graff; **Southern**, 360.

Ireland, the Nemertines *Prostoma* (*Tetrastemma*) *clepsinoides* and *Geonemertes chalicophora*; **Southern**, 360.

Sur la présence de *Polycelis cornuta* dans le Jura français; **Virieux**, 382.

Switzerland, list of Tricladida occurring; **Steinmann**, 363.

Die Verbreitung der Alpenplanarien und ihr Vorkommen in den Vogesen; **Bresslau**, 33.

Nemertini d'acqua dolce in Italia; **Monticelli**, 243.

Hungary (Tatra), *Planaria gonoccephala* and *alpina*; **Hankó**, 150.

Planarien des Baikalsees, *Sorocelis* spp. n.; **Zahusov**, 398.

Africa.

Nordostafrikanische Trematoden, genn. & spp. n.; **Odhner**, 281.

Asia.

Thibet, Turbellaria collected by Capt. F. Stewart; **Meixner & Muth**, 231.

America.

Neue Turbellarien des Ostens der Vereinigten Staaten von Amerika. Mit Nachträgen zu den „Marinen Turbellarien Orotavas und der Küsten Europas“; v. **Graff**, 131-133.

Oceanic.

A new non-parasitic Bdellourid (*Synsiphonium liouvillei*), Petermann's Isle, Antarctic; **Hallez**, 146.

Bothriomolus constrictus, detailed account of excretory system and comparison with that of *Bothrioplana*; **HALLEZ** Arch. zool. (sér. 5) 6 pp. 441-463 pl. xxii.

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Convoluta pelagica sp. n. Adriatic, diagnosed; **LÖHNER & MICOLETZKY** p. 482 text-fig. 1.—*C. p.*, detailed account; **LÖHNER & MICOLETZKY** Zs. wiss. Zool. 98 pp. 382-409 pl. xix.

Dalyellia inermis p. 32 pl. iii figs. 1-3, *rochesteriana* p. 33 fig. 4, *dodgei* p. 34 pl. ii figs. 31-42, *eastmani* p. 37 pl. iii figs. 5-8, *rossi* p. 39 figs. 26-31, *mohicana* figs. 37 & 38, *sillimani* figs. 10-17 p. 42, *rheesi* p. 44 figs. 18-25, *articulata* p. 46 figs. 34-36, *fairchildi* p. 47 figs. 32 & 33, spp. n., N. America; v. **GRAFF** Zs. wiss. Zool. 99.

Enterogonimus gen. n. *aureus* sp. n., note on character of ovaries; **HALLEZ** C. R. Acad. sci. 153 p. 141.

Euxinia gen. n. (*Alloiocoela Holo-coela*), *elegans* sp. n., characterized; v. **GRAFF** Anz. Ak. Wiss. 1911 p. 199.—*E. corniculata* sp. n. Sevastopol; v. **GRAFF** Zs. wiss. Zool. 99 p. 85 pl. vi figs. 12-17.

Gyratrix hermaphroditus subsp. n. *maculata*, N. America; v. **GRAFF** T.c. p. 68 pl. iv figs. 17-19.

Mesostomum ehrenbergii, occurrence and description; **PEASLEE** Trans. Amer. Microsc. Soc. 30 pp. 191-193 1 text-fig.

Microstomum davenporti sp. n. N. America; v. **GRAFF** Zs. wiss. Zool. 99 p. 29 pl. ii figs. 24-27.

Monocelis fasciata Orotava p. 89 pl. vi figs. 19 & 20, *wilhelmi* N. America p. 90 figs. 21-25, spp. n.; v. **GRAFF** T.c.

Monochoerus gen. n. (*Convolutidae*) p. 483, *illardatus* sp. n. Adriatic; **LÖHNER & MICOLETZKY** Zool. Anz. 37 p. 484 text-figs. 2 & 3.—*M. i.*, detailed account; **ID.** Zs. wiss. Zool. 98 pp. 409-425 pl. xx.

Monoophorum triste sp. n., N. America; v. **GRAFF** op. cit. 99 p. 81 pl. v figs. 30-32.

SYSTEMATIC.

1231

I. PLATYHELMINTHIA.

(a) Turbellaria.

Turbellaria (Acoela, Rhabdocoelida and Alloiocoela) Eastern United States, described; v. **GRAFF** Zs. wiss. Zool. 99 pp. 1-108 pls. i-vi.—Brief account in Anz. Ak. Wiss. 1911 pp. 198 & 199.

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Phaenocora agassizi sp. n. N. America; v. GRAFF Zs. wiss. Zool. 99 p. 52 pl. iv figs. 1–6.

Plagiostomum meledanum p. 70 pl. v figs. 1 & 2, Dalmatia, *stellatum* p. 73 pl. iv figs. 49–51, *morgani* p. 75 pl. v figs. 20 & 21, *wilsoni* p. 76 figs. 14–19, *whitmani* p. 77 figs. 11–13, N. America, spp. n.; v. GRAFF T.c.

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Proxenetes modestus sp. n., N. America; v. GRAFF T.c. p. 57. pl. iv figs. 12–16.

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Cercariae, methods of classification discussed, p. 418, British marine forms, systematic notes on, pp. 424-452 pls. xix-xxiv; *C. (Bucephalus) syndosmyae* p. 426 pl. xxv figs. 5 & 6, *C. scrivenerensis* p. 428 pl. xxv fig. 9, *minor* p. 434 pl. xxvii figs. 1 & 2, *buccini* p. 439 pl. xxvii figs. 17 & 18, *neptunae* p. 440 pl. xxviii figs. 1 & 2, *littorinae-obtusatae* p. 445 pl. xxviii figs. 15-17, n. spp. inq., occurrence and notes; LEBOUR Parasitol. 4.—*C.*, neue Formen aus Mollusken des Schwarzen Meeres pp. 7-38, *C. sinuosa* aus *Rissoa venusta* p. 7 pl. i f. 1-4, *dimorpha* aus *Cerithium exille* p. 9 figs. 5-11 (beide von *Microphallinae*), *zostera* p. 10 figs. 12-15, *inkermani* p. 12 pl. i f. 16 (beide von *Monostomidae*), *C. cribrata* p. 13 pl. i fig. 17, *metentera* aus *Rissoa venusta* p. 14 fig. 18, *mesentera* aus *Hydrobia ventrosa* p. 14 figs. 19-21, *sagittarius* aus *Cerithium exille* p. 15 figs. 22-25 pl. ii figs. 26-36, *laqueator* aus *Rissoa venusta* p. 19 f. 37 pl. iii figs. 38-42, *trivesicata* p. 21 figs. 43-44, *discursata* aus *Syndosmyia alba* p. 22 figs. 45-48, *equitator* aus *Cerithium exille* p. 26 figs. 50-53, pl. iv figs. 54-59, *quadripterygia* aus *Hydrobia ventrosa* p. 29 figs. 60-63, *zernovi* aus *Cardium exiguum* p. 30 figs. 64 & 65, spp. n., *C. suctoria* aus *Hydrobia ventrosa* p. 31 pl. iv figs. 66-69, *hydriformis* aus *Tapes rugatus* p. 25 pl. iii f. 49, *microsoma* aus *Hydrobia ventrosa* p. 32 f. 70, *navicularia* aus *Loripes lacteus* p. 32 figs. 71-72, *inconstans* aus *Nassa reticulata* p. 33 pl. v figs. 73-75, *pennata* aus *Tapes rugatus* p. 35 figs. 76-77, *plumosa* aus *Syndosmyia alba* p. 36 ff. 78-79, spp. n.; SINICYN Mém. Ac. sc. 30 5.

Cholepotes gen. n. für *Distomum ovojarctum* Odhn.; ODHNER Res. Swedish Zool. Exped. Egypt Pt. 4 No. 23 A p. 16 pl. ii fig. 4.

Clinostomum marginatum, hosts, occurrence and behaviour of parasites when liberated from the cysts; OSBOEN Biol. Bull. 20 pp. 350-366 1 pl.—*C. complanatum*, Rud. notes on larvae from the Danube; CIUREA Centralbl. Bakt. Abth. 1 60 Orig. pp. 354-358 1 pl.

Clonorchis endemicus (Bälz) (= *Dist. spatulatum* Lekt.), notes on structure, occurrence in various fish, mode of infection; KOBAYASHI Annot. Zool. Jap. 7 pp. 271-277 pl. x.

Dasymetra gen. n. (*Lepodermatidae*) *conferta* sp. n., from *Tropidonotus rhombifer*, descr.; NICOLL Proc. Zool. Soc. 1911 pp. 683-686 pl. xxviii figs. 8-10.

Deradena genotype *ovalis*; LINTON Science N. Ser. 33 p. 303.

Desmogonius gen. n. (*Monostomidae*) *desmogonius* sp. n. diagnosed and compared with *Charaxicephalus*; STEPHENS Ann. trop. Med. Parasitol. 5 pp. 497-500 pl. xxiii.

Dicrocoelium (*Distomum*) *cirrigerum* (Baer), general account; SOLOWIOW Zool. Anz. 38 pp. 68-81 8 text-figs.—*D. macrostomum* sp. n. White Nile from *Numida ptilorhyncha*; ODHNER Res. Swedish Zool. exped. Egypt Pt. 4 No. 23 A p. 88 pl. ii fig. 11.

Echinostomum (*Fascioletta*) *ilocanum* (Garrison), from Man, morphological characters; ODHNER Zool. Anz. 38 pp. 65-68 1 text-fig.—*E. secundum* Nicoll, notes on rediae and cercariae and their hosts; LEBOUR Parasitol. 1 pp. 352-358 pl. xxiv.—*E. volvulus* p. 114 pl. iii figs. 4-6 pl. vi figs. 6-7, *sudanense* p. 116 pl. iii figs. 12-13, *niloticum* p. 117, *lobulatum* p. 119 pl. iii figs. 9-11, *variospinosum* p. 121 pl. v figs. 2-3, *famelicum* p. 126 pl. iv fig. 2, spp. n. from various birds, *spinosum* p. 139 nom. n. for *Monilifer spinulosus* Dietz nec Rud.; ODHNER Res. Swedish Zool. exped. Egypt Pt. 4 No. 23 A.

Fascioletta vide *Echinostomum*.

Fasciolopsis buski ("Kwan's fluke"), note on and presence of cuticular spines; LEIPER J. trop. Med. 14 pp. 119 & 120.

Fellodistomidae and *Fellodistominae* vide *Stringophoridae* and *Stringophorinae*.

Galactosomum (= *Microlistrum* Braun) *cochleariforme* (Rud.), described; PRATT Zool. Anz. Leipzig 38 pp. 143-148 5 text-figs.

Gastrothylax wenyoni sp. n., occurrence and description; LEIPER Rep. Wellcome Res. Lab. 3 pp. 195-197 text-figs. 46-48.

Genolopa genotype *ampullacea*; LINTON Science N. Ser. 33 p. 303.

Hamacreadium genotype *mutabile*; LINTON T.c. p. 303.

Haplocladinae subfam. n. (*Fello-distomidae*); ODHNER Zool. Anz. 38 p. 103.

Haplocladus gen. n. (*Fellodistomidae*) *typicus* from *Caranx trachurus*, minor from *Pleuronectes limanda*, spp. n.; ODHNER T.c. pp. 103-105 text-fig. 4.

Hassallius gen. n. p. 30, genotype *hassalli* sp. n. from *Ambloplites rupestris* Indiana pp. 30-35 figs. 17 & 18; GOLDBERGER U. S. Hyg. Lab. Bull. No. 71.

Hemiuridae, composition, classification and relationships of the family; ODHNER Zool. Anz. 38 pp. 524-528.

Heterechinostomum gen. n. type *Het. mordax* (Lss.); ODHNER Res. zool. exped. Egypt Pt. 4 No. 23 A p. 163.

Hoplometroides gen. n. (*Lepodermatidae*) *buccicola* sp. n. from *Elaps* Paraguay; ODHNER T.c. p. 47 pl. ii fig. 10.

Hyptiasmus gen. n. für *arcuatus* Stoss. 1902, *laevigatus*, *tumidus*, *oculeus*, *ominosus*, spp. n.; KOSSACK Diss. Königsberg 1911 pp. 14-18.

Koellikeria filicollae (Rud.), occurrence and note; JOHNSTONE Trans. Livpl. Biol. Soc. 25 p. 107 text-fig. 5.

Lecithostaphylus gen. n. (*Zoogonidae*) for *retroflexus* (Molin); ODHNER Zool. Anz. 38 p. 114 text-fig. 8.

Lechriorchis validus sp. n. from *Heterodon platyrhinus*, descr.; NICOLL Proc. Zool. Soc. 1911 pp. 677-681 pl. xxvii figs. 1-5.

Lepodora elongata sp. n., from cod, intestine; LEBOUR Northumberland Sea Fisheries Rep. 1907 (reprint) p. 20 pl. ii figs. 5 & 6.

Macrechinosomum gen. n. (*Echinostomidae*) type *M. croaticum* (Stoss.); ODHNER Res. zool. exped. Egypt Pt. 4 No. 23 A p. 162.

Mesocoelium gen. n. for *Distomum sociale* Lhe; ODHNER T.c. p. 88.

Microlistrum Braun syn. *Galactosomum*, q. v.

Monorchidae fam. n. characterized; ODHNER Zool. Anz. 37 p. 247.

Monostoma faba in *Passer domesticus*; COLE Bull. Wisc. Nat. Hist. Soc. 9 pp. 42-48 pls. v-vi.

Monostomidae, general systematic account; KOSSACK Zool. Jahrb. Abt. f. Syst. 31 pp. 491-590 pls. xiii-xv & Diss. Königsberg 1911 33 pp.

Nephrocephalus sessilis Odhner, Anatomie und Histologie; MIESTINGER Arb. Zool. Inst. Wien 19 pp. 289-296 5 text-figs.

Notocotyle quinqueserialis sp. n. from *Fiber zibethicus* Nebraska described; BARKER & LAUGHLIN Trans. Amer. Microsc. Soc. 30 pp. 261-274 1 pl.

Ochetosoma formosum sp. n., from *Leptodira annulata*, descr.; NICOLL Proc. Zool. Soc. 1911 pp. 681-683 pl. xxviii figs. 6 & 7.

Paracotyle gen. n. (near *Monocotyle*), *caniculae* sp. n., occurrence and description; JOHNSTONE Proc. Trans. Livpl. Biol. Soc. 25 pp. 88-107 pls. i & ii.

Paralecithodendrium subgen. n.; ODHNER Res. Zool. exped. Egypt Pt. 4 No. 23 A p. 78.

Pharyngora gen. n. (*Lepocreadiinae*), *retractilis* sp. n., occurrence and diagnosis; LEBOUR Northumberland Sea Fisheries Rep. 1907 (reprint) p. 22 pl. ii fig. 7.

Philophthalmus gralli M. & L., from fowl, description of, and comparison with other spp.; MATHIS & LÉGER Recherches de parasitologie etc. 1911 pp. 423-430 1 text-fig.

Plectanocotyle caudata sp. n., from grey gurnard; LEBOUR Northumberland Sea Fisheries Rep. 1907 (reprint) p. 42 pl. v figs. 4-7.

Pneumonoeces asper Lss. and *P. schulzei* sp. n., comparative morphology; WUNSCH Diss. Berlin 77 pp.

Proctoeces gen. n. (aberrant member of *Fellodistomidae*), type *Dist. maculatum* Lss., *erythraeus* sp. n., from *Chrysophrys* and *Julis*; ODHNER Zool. Anz. 38 p. 107 & 108.

Proctophantastes gen. n. (*Zoogonidae*), *abyssorum* sp. n., from fishes, Norway; ODHNER Zool. Anz. 37 p. 238 fig. 1.

Proctotrema gen. n. (*Monorchidae*), *bacilliovatum* sp. n. from *Mullus bar-*

batus, Trieste; ODHNER T.c. p. 249 fig. 2.

Proctotreminae sub. fam. n. (*Monorchidae*); ODHNER T.c. p. 248.

Pronopharynx nematoides Cohn, der umgekehrte Hinterkörper einer Holostomide (*Holostomum* sp. ?); ODHNER Zool. Anz. 38 pp. 391-392.

Prosorhynchus grandis sp. n., from cod and whiting; LEBOUR Northumberland Sea Fisheries Rep. 1907 (reprint) p. 13 pl. i fig. 5.

Pseudechinostomum gen. n. (*Echinostomidae*), *incoronatum* sp. n. from *Ceryle rudis*; ODHNER Res. Swedish zool. exped. Egypt Pt. 4 No. 23 A p. 142 pl. iv fig. 12 pl. vi fig. 10.

Pycnadena nom. n. for *Didymorchis* Linton; LINTON Science N. Ser. 33 p. 303.

Rhodotrema gen. n. (*Fellodistominae*) for (*Steringophorus*) *ovacutum* (Lebour); ODHNER Zool. Anz. 38 p. 100 text-figs. 1 & 2.

Sanguinicola, a digenetic form, account of morphology, comparison with *Aporocotyle*, mode of infection, development of *Cercaria* (*C. cristata*); ODHNER T.c. pp. 33-45 6 text-figs.

Schistosoma haematobium, variations in character and position of spine of eggs support view that *S. mansoni* is distinct species; LEIPER J. trop. Med. 14 pp. 120 & 121 8 text-figs.—*S. h.*, account of development of eggs and comparison with *S. mansoni* and *S. japonicum*; LOOSS J. trop. Med. 14 pp. 177-182 1 double pl.—*S. japonicum*, presence of a lateral spine to eggs; LEIPER J. trop. Med. 14 pp. 76 & 77 1 text-fig.—*S. j.*, absence of spines on the eggs and distinction from *S. mansoni*; WOOLLEY & HUFFMAN Parasitol. 4 pp. 131 & 132.—*S. mansoni* and *haematobium*, comparative account with special reference to eggs; the two species certainly distinct; FLU Geneesk. Tijdsch. Ned. Ind. 51 pp. 760-782 1 Taf. and in Centralbl. Bakt. Abth. 1 61 Orig. pp. 389-403 6 text-figs.

Schizostoma [*Schistosoma*] *crassa* Turkestan in Rindern, Beschreibung (Russ.); SKRIABIN Arch. veterin. nauk. 41 pp. 1167-1176 2 pl.

Spaniometra gen. n. für *oculobia* Cohn 1892; KOSSACK Diss. Königsberg 1911 p. 20.

Stephanochasmus rhombispinosus from whiting, p. 25 pl. ii figs. 9 & 10, *triglae*, p. 27 pl. iii figs. 3 & 4, spp. n., diagnosed; LEBOUR Northumberland Sea Fisheries Rep. 1907 (reprint).

Steringophoridae fam. n. [should be *Fellodistomidae*, as the author himself recognises]; OHDNER Zool. Anz. 38 p. 97.

Steringophorinae nom. n. for sub. fam. *Fellodistominae* Nic. [this change in name appears to contravene the usually accepted rule]; OHDNER T.c. p. 98.

Steringotrema gen. n. (*Fellodistominae*) for (*Steringophorus*) *cluthensis* (Nicoll) and *Dist. divergens* Rud.; OHDNER T.c. p. 101 text-fig. 3.

Styphlodora bascaniensis sp. n. from liver of *Bascanion constrictor*, with blind Laurer-Stieda canal, description; GOLDBERGER Proc. U. S. Nation. Mus. 40 pp. 233-239 3 text-figs.—*S. condita* sp. n., occurrence and description; DE FARIA Mem. Inst. Oswaldo Cruz 3 pp. 40-45 pl. i.

Styphlotrema gen. n. for *Styphlodora solitaria* Lss.; OHDNER Res. Swedish zool. exped. Egypt Pt. 4 No. 23 A p. 54.

Telorchis (*Cercorchis*) key to spp. p. 36, *stossichi* p. 38, *attenuatus* from *Chrysemys marginata*, Indiana p. 38 fig. 19, *robustus* from *Cistudo carolina* Maryland p. 44, fig. 20, spp. n.; GOLDBERGER U. S. Hyg. Lab. Bull. No. 71.

Tergestia laticollis (Rud.) and *acanthocephala* (Stoss.), associated with *Fellodistomidae*, described; OHDNER Zool. Anz. 38 pp. 110-114 text-figs. 5-7.

Thaumatocotyle gen. n. for *Distomum pulvinatum* Brn.; OHDNER Res. Swedish zool. exped. Egypt Pt. 4 No. 23 A p. 20 text-fig. 4.

Zoogonidae fam. n. characterised; OHDNER Zool. Anz. 37 p. 237.

Zoogonoides subaequiporus sp. n. from *Anarrhichas*, Drontheim; OHDNER T.c. p. 244.

(c) Cestoda.

Cestoda from Baltic fishes, notes on; SCHULTZ Wiss. Meeresunters. Abth. Kiel N. F. 13 pp. 302-304 pl. iii figs. 1-8.

Cestodes de deux genettes capturées en Tunisie; WEISS Alger Bul. Soc. hist. nat. 1 pp. 113-115 figs.

Cestoda des oiseaux d'Oural, énumération systématique; CLERC Ekaterinburg Bull. soc. nat. 30 pp. 99-113.

Acoleus hedleyi nom. nov., for *Taenia rugosa* Krefft, from *Himantopus leucocephalus*, note; JOHNSTON Sydney J. Proc. Roy. Soc. 44 p. 94.

Anomotaenia rhinocheti sp. n. from *Rhinochetus jubatus*, New Caledonia, described; JOHNSTON Proc. Linn. Soc. N.S. Wales 36 pp. 70-74 pl. v.—*A. rustica* sp. n. occurrence and diagnosis; NESLOBINSKY Centralbl. Bakt. Abth. 1 57 Orig. p. 441 text-figs. 16-19.

Anoplocephala latissima nom. nov. (*Taenia magna* Murie), Anatomie; DEINER Arb. Zool. Inst. Univ. Wien 19 pp. 347-372 2 pls.

Anoplotænia gen. n. (allied to *Anoplocephalidae*), *dasyuri* sp. n. described; BEDDARD Proc. Zool. Soc. 1911 pp. 1003-1018 text-figs. 208-215.

Aploparaksis fuligulosa sp. n., occurrence and diagnosis; SOLOWIOW Centralbl. Bakt. Abth. 1 60 Orig. p. 119 text-figs. 20-22.

Avitellina gen. n. (*Stilesinae* = *Avitellinae*), for *S. centripunctata* (Riv.), diagnosis, comparison with *Stilesia*, and account of histology; GOUGH Q. J. Microsc. Sci. 55 pp. 322 & 334-378 pls. xii figs. 1-7, xiii & xiv.

Bancroftiella gen. n. (*Dipylidiinae*) *tenuis* sp. n. from *Macropus valabatus*, described; JOHNSTON Proc. Linn. Soc. N.S. Wales 36 pp. 50-57 pl. iii.

Bertiella cercopitheci sp. n., described; BEDDARD Proc. Zool. Soc. 1911 pp. 638-651 text-figs. 151-155.

Biuterina mertoni sp. n. from *Paradisea apoda*, Aru Isl., described; FUHRMANN Abh. Senckenb. Ges. 34 p. 257 text-fig. 11.

Bothriocephalus andresi sp. n. from *Eucitharus*; PORTA Zool. Anz. 38 p. 373 6 text-figs.

Choanoscolex gen. n. (*Proteocephalidae*) for *Ichthyotaenia abscura* Riggenbach; LA RUE T.c. p. 479.

Choanotaenia meliphagidarum sp. n. from *Meliornis* spp. and *Ptilotis* spp.; JOHNSTON Proc. Linn. Soc. N.S. Wales 36 pp. 58-70 pl. iv.

Cotugnia browni sp. n. p. 284 pl. ii, figs., 6-10; SMITH FOX & WHITE Univ. Penn. Med. Bull. 20.

Cysticercoids of *Hymenolepis diminuta* and *H. murina* (?), occurrence and notes on; NICOLL & MINCHIN Proc. Zool. Soc. 1911 pp. 9-13 2 text-figs.

Davainea aruensis text-figs. 7 & 8, *psittacea* fig. 9, *oligorchida* fig. 10, spp. n. from birds Aru Isl.; FUHRMANN Abh. Senckenb. Ges. 34 pp. 255 & 256.—*D. himantopodis* sp. n. from *Himantopus leucocephalus*, South Australia, described; JOHNSTON Proc. Linn. Soc. N.S. Wales 36 pp. 75-79 pl. vi.—*D. madagascariensis* Dav., in the Philippines, note on; GARRISON Philippine J. Sci. Manila B 6 pp. 165-175 pl. i.

Dibothriocephalus antarcticus, *scotti* and *wilsoni*, all from a seal (*Ommatophoca rossi*), described; SHIPLEY National Antarctic Expedition Nat. Hist. vol. 3 pp. 1-6 1 pl.

Dilepis australiensis sp. n. (= *Taenia coronata* Krefft), from *Himantopus leucocephalus*, note; JOHNSTON Sydney J. Proc. Roy. Soc. 44 p. 94.—*D. caprimulgina* p. 437 text-figs 1-4, *cypselina* p. 438 figs. 5-8, *monedulae* p. 438 figs. 9-11, *ochropodis* p. 440 figs. 12-14 spp. n. from birds, Russia; NESLOBINSKY Centralbl. Bakt. Abth. 1 57.—*D. brachyarthra* Chol. a distinct species from *D. undulata* Schr., diagnostic points; ID. op. cit. 59 pp. 416 & 417 4 text-figs.

Gyrocotyle, key to classification and distinction of species pp. 376-382, morphological account of genus with special reference to *G. fimbriata* sp. n., pp. 365-371, 383-418 pls. xxxiii-xlviii; WATSON Univ. Calif. Publ. Zool. 6 No. 15.

Hymenolepis upsilon sp. n., description and comparison with *Taenia microsoma*; ROSSETER J. Quek. Microsc. Cl. Ser. 2 11 pp. 147-160 pl. vi.—*H. villosoides* sp. n. in *Fuligula cristata*; SOLOVJEFF Varžava Izv. Univ. 1911 2 p. 7, 3 p. 9 figs. 2-6,

4 p. 25.—*H. v.* p. 97 text-figs. 2-6, *megarostellis* sp. n. p. 111 figs. 7-11, *H.* spp. var. p. 116 figs. 12-17, diagnosed; SOLOWIOW Centralbl. Bakt. Abth. 1 60.

Mesocestoides lineatus (Goëze) account of structure, distinctions from *M. litteratus*; FODERÀ Boll. Soc. zool. ital. Ser. II 12 pp. 261-267 3 text-figs.

Monopylidium infundibulum Bloch. (*Taenia infundibuliformis* Gze.). synonymy and systematic position; SOLOWIOW Centralbl. Bakt. Abth. 1 60 Orig. pp. 93-96.

Monticellia gen. n. (*Monticellidae* fam. n.) type *Tetracotylus coryphicephala* Monticelli; LA RUE Zool. Anz. 38 p. 474.

Multiceps Goetze 1782, *M. m.* (Leske) for (*Taenia*) *Coenurus cerebialis*; HALL U. S. Dept. Agric. Bur. animal Ind. No. 125 p. 14.

Oochoristica sp. from *Tamandua tetradactyla*, described; BEDDARD Proc. Zool. Soc. 1911 pp. 627-638 text-figs. 148-150.

Ophiotaenia gen. n. (*Proteocephalidae*) *perspicua*, *grandis*, spp. n., hosts and diagnoses; LA RUE Zool. Anz. 38 p. 480.

Phoreiobothrium trilocolatum, notes on structure, larval form; CURTIS J. Morphol. 22 pp. 819-853 2 pls.

Proparuterina gen. n. (*Dilepinidae*), *aruensis* sp. n., from *Podargus papuensis*, Aru Isls., described; FUHRMANN Abh. Senckenb. Ges. 34 p. 265 text-figs. 21-24.

Proteocephalidae, revision of family with diagnoses of new genera and species; LA RUE Zool. Anz. 38 pp. 473-482.

Proteocephalus Weinland 1858 = *Ichthyotaenia* Lönnberg 1894, *P. (Taenia) punicus*, synonymy and note on; HALL Smithsonian Inst. Proc. U. S. Nation. Mus. 39 (No. 1780) pp. 146-149.—*P.* Weinland (syn. *Ichthyotaenia* Lönnb.), type *filicollis* (Rud.) = *ambiguus* (Duj.) *dubius*, *fallax*, *neglectus*, *exiguus*, *pinguis*, *perplexus*, *singularis* spp. n. diagnoses and occurrence; LA RUE Zool. Anz. 38 pp. 475-479.—*P. (Ichthyotaenia) gallardi* sp. n. occurrence and description; JOHNSTON Ann. Queensland Mus. 10 pp. 175-182 pl. vii.

Proterogynotaenia gen. n. (near *Gynotaenia*), *rouxi* sp. n. from *Ochthodromus*, Aru Isl., described; FUHRMANN Abh. Senckenb. Ges. **34** p. 259 text-figs. 12-20.

Rhynchobothrius tetrabothrius v. Ben., anatomischer Bau; ZERNY Arb. Zool. Inst. Univ. **19** pp. 297-316 1 pl.

"*Scolex polymorphus*," probably larval form of *Phoreiobothrium trilobulatum*, experimental infection of sharks with; CURTIS J. Morphol. **22** pp. 819-853 2 pls.

Sphyrnocolaenia gen. n. (*Davaineidae*) *uncinata* sp. n., parasitic in *Neotis caffra* (bustard), described; RANSOM Proc. U. S. Nation. Mus. **40** pp. 637-647 7 text-figs.

Stilesia Raill., history of the genus and chief species, enumeration of species and occurrence, account of morphology; GOUGH Q.J. Microsc. Sci. **56** pp. 318-334 pl. xii figs. 8-16.

Taenia balaniceps sp. n., from dog and lynx, described, pp. 139-146, 9 text-figs.; HALL Smithsonian Inst. Proc. U. S. Nation. Mus. **39** (No. 1780).—(*Taenia*) *Coenurus cerebralis* (*Multiceps multiceps*) occurrence, historical survey, and synonymy, pp. 6-56, (*T.*) *C. serialis* pp. 56-66; HALL U. S. Dept. Agric. Bur. Animal Ind. No. **125**.—*T. paradoxuri* p. 283 pl. ii, figs. 1-5, *eunectes* p. 283 pl. iii, spp. n.; SMITH, FOX & WHITE Univ. Penn. Med. Bull. **20**.—*T. magna*, Murie vide *Anoplocephala latissima*.

Tetrarhynchus erinaceus Van Ben., description of structure of adult form and Plerocercoid larva; JOHNSTONE Parasitol. **4** pp. 364-415 pls. xix-xxiv and 9 text-figs.

Thysanosoma gambianum sp. n., from *Cricetomys*, described; BEDDARD Proc. Zool. Soc. **1911** pp. 651-660 text-figs. 156-157.

Thysanotaenia gen. n. (*Thysanosominae*), for *lemuris* sp. n. (also for *Thysanosoma gambianum*), described; BEDDARD T.c. pp. 994-1003 text-figs. 204-207.

NEMERTINEA.

Lineus lacteus Grube, Bildung des ganzen neuen Darmkanals durch Wanderzellen mesodermalen Ursprunges bei

der Kopfrestitution; NUSBAUM & OXNER Zool. Anz. **37** pp. 302-315 11 text-figs.

Malacobdella grossa (Müll.), development of sexual cells, maturation, fertilization; GERING Zs. wiss. Zool. **97** pp. 673-720 pl. xxxii.

Paralineus gen. n. (subfam. *Lineinae*) *coecus* (Timofej.), Villefranche s.-m., described; SCHÜTZ Zool. Anz. **37** pp. 449-457 7 figs. (The author proposes the new specific name *elisabethae* for this form, notwithstanding that the name *coecus* is already given to it.)

NEMATHELMINTHIA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1403

Historical.

Historical records of intestinal worms in ancient times; MOULÉ, 252.

Bibliography.

Jahresbericht über Nematheilmintia und Acanthocephala für 1909; FUHRMANN, 105.

Economics.

RELATION TO DISEASE.

Substances toxiques de l'*Ascaris megalocephala* (pour le cheval); WEINBERG et JULIEN, 391.—Substances toxiques de la Trichine et de ses larves; ROMANOVITCH, 310.

Ascaridi non posseggono tossicità; GUERRINI, 141 & 142.

Indian camel filariasis; LEESE, 191.

Effects of *Onchocerca gibsoni* on cattle; LEIPER, 198.

Oxyuris occurring in the human appendix in cases of appendicitis; RAILLIET, 296.

Presence of Nematodes (unspec.) in the cutaneous swellings of "Esponja" of horses in Brazil, and their possible causal connection with the disease; **Ferret, Dupuy et Mercier, 84** (1 pl.).

Osservazioni anatomo-patologiche riguardanti una nuova specie di *Spiroptera* (*S. perforans*) del pollo; **Centocudi, 37**.

Larvæ of *Strongyloides intestinalis* in human lung; **Gage, 108**.—Einiges über die Lungenwurmseuche (*Strongylidae*); **Sallaë, 321**.

Les cerfs de la forêt de Chantilly sont décimés par les Helminthes (*Strongylidae*); **Brumpt, 34**.

Strongylus (*Sclerostoma*) *pinguicola* and pigs; **Hellemans, 154a**.

La strongylose gastro-intestinale et l'oesophagostomose larvaire jouent un rôle prépondérant dans l'étiologie de la "cachexie aqueuse" des ruminants; l'helminthiase nodulaire du bœuf est rapporté à l'oesophagostomose (*Oes. columbianum*); **Cuillé, Marotel et Panisset, 59**.

Pathological condition of the liver of a hare due to Nematode eggs (cf. *Trichostrongylus*); **Nicoll, 267**.

Trichodes crassicauda specifica, eine Causa directa in der Aetiologie der Tumoren; **Löwenstein, 217**.

Die Aphelenchen der Veilchengallen und der Blattflecken an Farnen und *Chrysanthemum*; **Schwartz, 330**.

METHOD OF INFECTION.

Mode of infection of *Cyclops* with the *Filaria medinensis*; manner of entry and exit of the worm; **Leiper, 192**.

Untersuchungen über den Infektionsweg bei *Strongyloides* und *Ankylostomum*; **Fülleborn & Schilling, 103b**.

Filaria medinensis: suo modo di penetrazione nell' organismo umano; **Coppola, 57**.

Anguillula intestinalis: penetrazione delle sue larve attraverso la cute; **Marzocchi, 226**.

Technique.

Methode zur Anzeigerung von Ankylostomenlarven zwecks Thierinfektion; **Fülleborn, 103a**.

(N-9186 o)

Technique for fixing and preserving Nematodes; **Leiper, 194**.

STRUCTURE. 1407

General.

NEMATODA.

Description of male and female *Filaria loa*; **Huffman & Wherry, 163**.

Beiträge zur Morphologie der *Filaria bancrofti*, **Cobbold; Hida, 156a**.

Account of anatomy and embryo of *Onchocerca gibsoni*; **Leiper, 198**.

Struktur der Süßwasser-Mermithiden; **Daday, 61 & 62**.

Morphology of *Spiroptera strongylina* Rud.; **Chiurea, 46a**.

Account of *Strongylus pinguicola* (*Sclerostoma pinguicola* Verrill, *Stephanurus dentatus* Diesing); **Hellemans, 154a**.

Trichinella spiralis, anatomy; **Frothingham, 102**.

Muscular System.

Fibres musculaires d'*Ascaris*. 1.
Fibres pariétales; **de Baillon, 12**.

Nervous System.

Système nerveux de l'*Ascaris* d'après des travaux récents (revue critique); **de Rouville, 319**.

PHYSIOLOGY. 1411

Production of Sex.

Ueber die Geschlechtschromosomen bei einigen Nematoden nebst Bemerkungen über die Bedeutung dieser Chromosomen; **Gulick, 143**.

Das Verhalten des Chromatins bei *Angiostomum* (*Rhabdonema*) *nigrovenosum*. Ein Beitrag zur Kenntnis der Beziehungen zwischen Chromatin und Geschlechtsbestimmung; **Schleip, 325**.

Environmental Effects.

Durch Radiumbestrahlung hervorgerufene Veränderungen in den Kernteilungsfiguren der Eier von *Ascaris megalocephala*; **Hertwig, 156**.

Kompressionsversuche am befruchteten Ei von *Ascaris megalocephala*; **Girgolaß, 120**.

b 9-2

Résistance au froid des embryons des Strongylidés intestinaux; **Galli-Valerio, 109a.**

REPRODUCTION. 1415

Development; Life-History.

Anquillula intestinalis nella *Rana*: sua origine; **Alfieri, 1.**

Metamorphosis of *Filaria* in the body of the mosquito (*Culex pipiens*); **Lebrede, 189.**

Development of *Trichostrongylus pergracilis*; **Leiper, 204.**

Spermatogenesis, Oogenesis, etc.

Ueber die Geschlechtschromosomen bei einigen Nematoden nebst Bemerkungen über die Bedeutung dieser Chromosomen; **Gulick, 143.**

Das Verhalten des Chromatins bei *Angiostomum* (*Rhabdonema*) *nigrovenosum*; **Schleip, 325.**

Chromosomenverhältnisse in den Spermatiden bei dem Nematoden *Ancyracanthus cystidicola*; **Mulsow, 254.**

The sex-chromosomes in *Ascaris felis*; **Edwards, 78.**

La réduction plasmatique dans la spermatogénèse de l'*Ascaris megalocephala*; **Romieu, 311.**—La spermiogénèse chez l'*Ascaris megalocephala*; **Romieu, 312.**

Über die Beteiligung der Plastrochondrien an der Befruchtung des Eies von *Ascaris megalocephala*; **Meves, 234.**

Über Auftreten und Teilungen abnorm grosser zweiter Richtungskörper bei *Ascaris megalocephala bivalens*; **Kautzsch, 175.**

Ueber das Verhalten der Geschlechtschromosomen bei Hermaphroditismus. Beobachtungen an *Rhabditis nigrovenosa*; **Boveri, 28.**

Experimental Embryology.

Kompressionsversuche am befruchteten Ei von *Ascaris megalocephala*; **Girgolafl, 120.**

Larval Forms.

Larval forms of *Filaria loa*, taken from a living female, identical with *F. diurna*; **Huffman, 162.**

Une larve de Spiroptère parasite des Coléoptères ioprophages et des Reptiles; **Seurat, 340.**

ETHOLOGY. 1419

Bionomics.

Bionomics of *Trichostrongylus pergracilis*; **Leiper, 204.**

Biological factors and Nematode (hookworm) infections in tobacco haciendas, Philippine Islands; **Willets, 396.**

Parasitism.

Register der Nematoden u. Acanthocephalen Deutschlands, geordnet nach ihren Wirthen; **Lühe, 221.**

An und in Pflanzen lebende Nematoden; **Braun, 32.**

Tylenchus biformis n. sp. attacking the sugar-cane, Hawaii; **Cobb, 50.**

Sur l'habitat et les migrations de *Spirura talpae* Gmel. (*Spiroptera strumosa* Rud.) (dans *Blatta orientalis*, *Blaps strauchii* et *Erinaceus algirus*); **Seurat, 339.**

Mermis sp. parasite of *Simulium* larvæ (*S. hirtipes*); **Strickland, 371.**

Habronema muscae parasitic in house-fly and horse; **Ransom, 300.**

Larve de Spiroptère parasite des Coléoptères ioprophages et des Reptiles; **Seurat, 340.**

The question of the intermediate host of *Filaria loa*; **Low, 219.**

Nemathelminths from various hosts; **Porta, 293.**

Nematodes from different animals, Zoological Gardens, London; **Leiper, 203.**

New Nematodes from various animals, Soudan; **Leiper, 194.**—New Nematodes from various animals, Tropical Africa; **Leiper, 196.**

Nematoda and Acanthocephala occurring in fishes from the Baltic; **Schultz, 328.**

Nemathelminth parasites of fishes, Lake of Lucerne; **Nufer, 271.**

Nematodes (*Ichthyonema globiceps*) in muscles of a marine food-fish, (*Tylosurus acus*); **Linton, 209.**

Anguillula intestinalis della *Rana*; **Alfieri, 1.**

Filariae of various mammals and birds, Tonkin; **Mathis & Léger, 228.**

Five new sanguinicolous *Microfilariae* from birds, all named after unknown medical men, instead of after their hosts; **Mathis & Léger, 227.**

Nematode parasites of Australian birds; **Johnston, 170.**

Nematoden der Vögel des Urals; **Clerc, 48.**

Heterakis inflexa and *vesicularis* in the digestive canal of fowls; **Bonnesen, 26.**

Osservazioni riguardanti una nuova specie di *Spiroptera* (*S. perforans*) del pollo; **Centosculi, 37.**

New species of *Heterakis* from birds and small mammals, Dahomey; **Gen-dre, 116.**

Sur un *Echinorhynque* nouveau (*Echinorhynchus brumpti* n. sp.), parasite de l'intestin du hérisson (*Erinaceus europaeus*); **Blanc et Cauchemez, 22.**

Two new species of *Trichostrongylus* from Mammals; **Ransom, 299.**

In pigs, Roumania, *Gnathostoma hispidum* Fedtsh.; **Ciurea, 46b.**

Das Auftreten des *Strongylus pinguicola* (*Sclerostoma pinguicola* Verrill, *Stephanurus dentatus* Diesing) in Schweinen auf Java und Sumatra; **Helle-mans, 154a.**

Die im Haarwild und in Haussäug-tieren lebenden Strongyliden; **Linstow, 210.**

In Californian ground-squirrel, *Oto-spermophilus* (*Citellus*) *beecheyi*, blood, *Microfilaria rosenau* n. sp.; **McCoy, 230.**

In stags, Forest of Chantilly, *Dictyo-caulus noerneri* Rail. and Hen. (lungs), *Nematodirus roscidus* n. sp. and *Capil-laria* n. sp. (intestine), also other forms; **Brumpt, 34.**

Les Ascarides des Carnivores, avec formes nouvelles; **Railliet et Henry, 297.**

Ascaris transfuga Rud. im Eisbären (*Thalassarcos maritimus*); **Freund, 101.**

Ueber *Ascaris mystax* R. beim Menschen; **Schöppler, 325a.**

Oesophagostomum apiostomum as an intestinal parasite of Man in Nigeria; **Leiper, 200.**

Oxyuris vermicularis: suo incapsula-mento nella cavità peritoneale; **Strada, 370.**

Physaloptera mordens of frequent occurrence in the intestine of Man in Tropical Africa; also from *Simia* (Angola); **Leiper, 201.**

Situation and migratory track of the larval *Trichinae*; **Romanovitch, 310.**

Triodontophorus deminutus in a native, Nyassaland; **Leiper, 195.**

VARIATION, PHYLOGENY. 1423 (Vacant.)

DISTRIBUTION. 1427 (See also Ethology.)

Switzerland (Lake Lucerne, mostly), fresh-water Nemathelminths; **v. Daday, 61 & 62.**

Danish freeliving Nematodes, with new forms; **Ditlevsen, 72.**

SYSTEMATIC. 1431

NEMATHELMINTHIA.

Nemathelminths of fishes, Lake of Lucerne, descriptive notes; **NUFER** Mitth. Natf. Ges. Luzern 5 pp. 158-183 figs. 12-17.

Nematoda and Acanthocephala from Baltic fishes, descriptive notes; **SCHULTZ** Wiss. Meeresunters. Abth. Kiel N.F. 13 pp. 304-307 pl. iii figs. 9-20.

(a) Nematoda.

Nematoda, free-living, Swiss Lakes, account of; **DADAY** Rev. Suisse Zool. Genève 19 pp. 501-536 pls. xv-xvii.

Danish free-living Nematodes; DITLEVSEN København Nath. Medd. 63 pp. 213-256 pls. ii-v.

Acheilostoma gen. n. (*Ankylostomidae*) *simpsoni* sp. n., occurrence and description; LEIPER Proc. Zool. Soc. 1911 p. 549 text-fig. 140.

Aphelenchus olesistus Ritz var. n. *longicollis*; SCHWARTZ Mitt. biol. Anst. H. 11 pp. 35-36.—*A. ritzema-bosi* sp. n.; SCHWARTZ Arb. biol. Anst. 8 pp. 303-334.

Ascaris aquillae p. 287 pl. v, *ardeae* p. 287 pl. vi, spp. n.; SMITH, FOX & WHITE Univ. Penn. Med. Bull. 20.

Bathymermis gen. n. verwandt mit *Pseudomermis* und *Mermis*, *B. fuhrmanni*, *helvetica*, spp. n., Vierwaldstädter See; DADAY Math. és Term. Ért. pp. 493-496 Taf. iii fig. 3-16, also Rev. Suisse Zool. 19 pp. 520 & 521 figs. 12 & 13.

Belascaris gen. n. type *Ascaris mystax* (Zeder), characterized; LEIPER Brit. Med. J. 1907 i p. 1297.—*B.* diagnosis of genus p. 13, *masculior* sp. n. from *Fennecus zerda* p. 14; RAILLIET & HENRY C. R. Soc. Biol. 70.

Cobboldina nom. nov. for *Cobboldia* Leiper, preocc.; LEIPER Proc. Zool. Soc. 1911 p. 555.

Cylindrolaimus tristis sp. n., Denmark; DITLEVSEN Nath. Medd. 63 p. 235 pl. iii figs. 21 23 & 26.

Cylindropharynx gen. n. (*Strongylidae*) *brevicauda* text-fig. 141, *longicauda* text-fig. 142, spp. n., from zebra, described; LEIPER Proc. Zool. Soc. 1911 p. 551.

Dirofilaria gen. nov. p. 386 type *Filaria immitis* Leidy; RAILLIET & HENRY Bul. Soc. Path. Exot. 4.

Dispharagus ardeae sp. n. p. 293 pl. x figs. 4-6; SMITH, FOX & WHITE Univ. Penn. Med. Bull. 20.

Dorylaimus eurydorys p. 244 pl. iii fig. 25 pl. iv fig. 30. *tenuis* p. 246 pl. v figs. 39 40 42 43 & 46, *doryuris* p. 251 pl. iii fig. 28 pl. iv figs. 29 31, spp. n., Denmark; DITLEVSEN Nath. Medd. 63.

Eumermis gracilis sp. n., Lake of Lucerne; v. DADAY Rev. Suisse Zool. 19 p. 529 pl. xvii fig. 19, and Math. és Term. Ért. 29 p. 508 pl. iv figs. 14-17.

Filariae and *Microfilariae* of various mammals and birds, Tonkin, notes on pp. 399-414 pl. xiv; *F. (M.) sambuci*, from *Gallus ferrugineus*, p. 410 pl. xiv fig. 11, *tardieuvi* from *Centropus sinensis* p. 411 fig. 12, *baujeani* from *Athene cuculoides* p. 412 fig. 13, *bouffardi* from *Pica caudata* p. 414 fig. 14, spp. n., *mouzelsi* from *Garrulax perspicillatus* p. 413 fig. 7, *gaidei* from *Leptotilus* sp. p. 411 fig. 6, *bourreti* from *Copsychus saularis* p. 413 fig. 5; MATHIS & LEGER "Recherches de parasitologie et de pathologie" 1911.—*Filaria bancrofti*, Cobb., morphological notes; HIDA Centralbl. Bakt. Abt. 1 60 Orig. pp. 133-141 9 text-figs.—*F. bufonis* sp. n. connective-tissue of *B. regularis*, Soudan, diagnosed; LEIPER Rep. Wellcome Res. Lab. 3 p. 191.—*F. bauchei* sp. n.; RAILLIET & HENRY Bul. Soc. Path. exot. 4 p. 487.—*F. diurna* embryos (*Microfilaria loa*) undoubtedly distinct from those of *F. bancrofti*, but agree with uterine embryos of *F. loa*; Low J. trop. Med. 14 pp. 5 & 6.—*F. evansi*, from camels, notes; LEESE J. trop. vet. sci. 6 pp. 400-413 pl. xix and text-fig.—*F. grassii*: systematica, anatomia; NOË Ric. Lab. anat. norm. 15 pp. 235-252 1 tav.—*F. (Microfilaria) imperatoris*, descriptive notes; SEIDELIN Ann. trop. Med. Parasitol. 5 pp. 371-373 pl. xiv figs. 1-3.—*F. loa*, larval form described, identical with *F. diurna*; HUFFMAN Parasitol. 4 pp. 75-82 pl. iv.—*F. l.*, description of male and female specimens; HUFFMAN & WHERRY Parasitol. 4 pp. 7-18 pl. ii.—*F. mitchelli* sp. n., occurrence and diagnosis; SMITH Univ. Penn. Med. Bull. 23 pp. 487-497 figs.—*F. nocturna*, morphology of the embryo; WHERRY & McDILL J. Infect. Dis. 2 pp. 412-420 pls. xiii & xiv.—*F. philippinensis* sp. n. Philippines; ASHBURN & CRAIG Amer. J. Med. Sci. 132 pp. 345-443 5 text-figs.

Gaigeria pachyscelis Raill. & Hen., occurrence and description; GAIGER J. trop. vet. Sci. 6 pp. 301-306 4 text-figs.

Globocephalus macaci sp. n. p. 290 pl. viii; SMITH, FOX & WHITE Univ. Penn. Med. Bull. 20.

Gnathostoma hispidum Fedtsh., notes on; CIUREA Zs. Infekt-Krankh. Haustiere 10 pp. 288-292 pl. iii.

Habronema muscae parasitic in house-fly and horse, notes on life-cycle, distinctions from *H. microstoma*; RANSOM Science N. Ser. **34** pp. 690–692.

Heterakis brevispiculum, from fowl and other birds, p. 72 4 text-figs., *boueti* from *Xerus erythropus* p. 74 6 figs., *dahomensis* from *Cricetomys gambianus* p. 76 5 figs., **spp. n.**; GENDRE Proc.-verb. Soc. linn. **65**.—*H. numidae* **sp. n.**, from guinea-fowl, intestine, diagnosed; LEIPER Rep. Wellcome Res. Lab. **3** p. 193 text-fig. 44.

Hydromermis acuminata, *annulosa*, *bathycola*, *conura*, **spp. n.**, Swiss Lakes; DADAY Math. és Term. Ért. **29** pp. 503–506 Taf. iii fig. 17 Taf. iv figs. 1–13. —*H. acuminata* p. 524 pl. xvii fig. 15, *annulosa* p. 525 fig. 16, *bathycola* p. 526 fig. 17, *conura* p. 527 fig. 18, occurrence and diagnoses; v. DADAY Rev. Suisse Zool. **19**.

Ironus helveticus **sp. n.**, occurrence and description; v. DADAY T.c. p. 502 pl. xv fig. 1.

Leptosomatum australe, National Antarctic Expedition ("Discovery"), descriptive notes; v. LINSTOW National Antarctic Exped. Nat. Hist. vol. **3** pp. 1–4 1 pl.

Limnomermis **gen. n.**, verwandt mit *Filaria*), *bathybia*, *limnobia*, *limnetica*, *acuticauda*, *curvicauda*, *ensicauda*, *gracilis*, *uncata*, **spp. n.**, Vierwaldstädter See; DADAY Math. és Term. Ért. **29** pp. 480–489 Taf. ii.—*L. bathybia* p. 505 pl. xv fig. 2, *limnobia* p. 507 fig. 3, *limnetica* p. 509 fig. 4, *acuticauda* p. 511 fig. 5, *curvicauda* p. 512 fig. 6, *ensicauda* p. 513 pl. xvi fig. 7, *gracilis* p. 514 fig. 8, *uncata* p. 515 fig. 9, occurrence and description; DADAY Rev. Suisse Zool. **19**.

Mermithidae, Swiss Lakes, described; DADAY Math. és Term. Ért. **29** pp. 450–514 4 pls.

Mesomermis **gen. n.** (verwandt mit *Limnomermis*), *lacustris*, *zschokkei*, **spp. n.**, Vierwaldstädter See; DADAY Math. és Term. Ért. **29** pp. 491–493 Taf. iii figs. 1 & 2 Taf. ii fig. 12 & 13.—*M. lacustris* p. 517 pl. xvi fig. 10, *zschokkei* p. 518 fig. 11; DADAY Rev. Suisse Zool. **19**.

Metastrongylidae subdivided into *Trichostrongylinae* and *Metastrongylinae*

subfam. nn.; LEIPER Rep. Wellcome Res. Lab. **3** p. 191.

Microfilaria lasneti from Turnix *maculossus* text-fig. 1, *gaidei* from *Leptotilus* **sp. fig. 2**, *mouzelis* from *Garrulax perspicillatus* **fig. 3**, *bourreti* from *Copsychus saularis* **fig. 4**, pp. 60–62, **spp. n.**; MATHIS & LÉGER C. R. Soc. Biol. **70**.—*M. rosenawi* **sp. n.** from Californian ground-squirrel, described; McCoy Parasitol. **4** pp. 221 & 222 pl. vii.—*M. sp.*, in horse, Berlin, notes on; MANDEL Centralbl. Bakt. Abth. **1** **57** Orig. pp. 84–87 1 pl.—*M. von einem Haushuhn*, Bemerkungen; BERKE Centralbl. Bakt. Abt. **1** **58** Orig. pp. 326–330 1 pl.—*M. sp.*, from horses, notes; WIRTH Zs. Infekt. Krankh. Haustiere **10** pp. 161–174 pl. ii.

Monohystera crassissima **sp. n.**, Denmark; DITLEVSEN Nath. Medd. **63** p. 219 pl. iii figs. 14 15 & 22.

Mononchus dolichurus p. 228 pl. ii figs. 6 10 & 11, *spectabilis* p. 224 pl. iii figs. 17 19 27 & 28 pl. iv fig. 36, **spp. n.**, Denmark; DITLEVSEN T.c.

Nematodirus roscidus **sp. n.**, from stags, characters of eggs; BRUMPT C. R. Acad. Sci. **152** p. 907.

Oesophagostomum apiostomum, as a parasite of Man; notes on this form, which probably is same as *O. brumpti*; LEIPER J. trop. Med. **14** pp. 116–118 4 text-figs.

Onchocerca gibsoni, anatomy, effects on host, affinities; LEIPER J. trop. Med. **14** pp. 87–93 13 text-figs.

Oncholaimus oxyuris **sp. n.**, Denmark; DITLEVSEN Nath. Medd. **63** p. 230 pl. ii figs. 8 9 12 & 13.

Oxysoma perezi **sp. n.**, from large intestine of *Chamaeleon gracilis*, French Guinea; GENDRE Proc.-verb. Soc. linn. **65** p. 96 6 text-figs.

Oxyuris microtyphlon **sp. n.** p. 288 pl. vii; SMITH, FOX & WHITE Univ. Penn. Med. Bull. **20**.

Paramermis limnophila **sp. n.**, Vierwaldstädter-See; DADAY Math. term. Ért. **29** pp. 497–500 Taf. iii figs. 14 & 15, also Rev. Suisse Zool. **19** p. 523 pl. xvii fig. 14.

Physaloptera mordens, frequent occurrence in Man, Africa, and descriptive note; LEIPER J. trop. Med. **14** pp. 209–

211.—*P. quadrovarya* sp. n., from *Varanus niloticus*, intestine; LEIPER Rep. Wellcome Res. Lab. 3 p. 192 text-fig. 43.

Rhabditis prob. n. sp., in horse-dung, notes on structure and embryos; ALBRECHT Zs. InfektKrankh. Haustiere 10 pp. 370–374 pl. vi.

Setaria Viborg 1795 (non Oken 1815) type *S. equina* Abildg 1789, *S. congolensis* sp. n. p. 388; RAILLIET & HENRY Bul. Soc. Path. Exot. 4.—*S. bernardi* sp. n. p. 487; RAILLIET & HENRY T.c.

Spiroptera incerta p. 291 pl. ix., *S. (?) iguanae* p. 293 pl. x figs. 1–3, spp. n.; SMITH, FOX & WHITE Univ. Penn. Med. Bull. 20.—*S. perforans* sp. n., from *Gallus*; CENTOSCUDI Zool. Anz. 37 pp. 394–400 5 text-figs.—*S. strongyli* Rud., morphology; CIUREA Centrallbl. Bakt. Abt. 1 61 Orig. pp. 128–133 1 pl.—*S. uganda* sp. n., from monkey, diagnosed; LEIPER Proc. Zool. Soc. 1911 p. 554 text-fig. 144.

Strongylus pingicicola (*Sclerostoma pingicicola* Verrill, *Stephanurus dentatus* Diesing), Java and Sumatra, full description, discussion of nomenclature; HELLEMANS Centrallbl. Bakt. Abt. 1 57 Orig. pp. 212–239 8 text-figs.

Toxascaris gen. n. type *Ascaris leonina* (v. Linst.), characterized; LEIPER Brit. Med. J. 1907 i p. 1297.—*T.*, diagnosis of genus, p. 14, *limbata* sp. n. (= *T. marginata* (Rud.) Leiper) p. 15; RAILLIET & HENRY C. R. Soc. Biol. 70.

Toxocara Stiles, name to be eliminated; RAILLIET & HENRY T.c. p. 15.

Trachypharynx gen. n. (*Strongylidae*) *nigeriae* sp. n., occurrence and description; LEIPER Proc. Zool. Soc. 1911 p. 552 text-fig. 143.

Trichinella spiralis, anatomy; FROTHINGHAM J. Med. Res. 19 (N. Ser. 14) pp. 301–308 with pl.

Trichostrongylus falculatus from *Capra hircus* p. 364 text-figs. 1 & 2, *calcaratus* from *Lepus sylvaticus* p. 365 figs. 3–6, spp. n.; RANSOM Proc. U. S. Nation. Mus. 41.—*T. pergracilis*, development, bionomics; LEIPER in: "The grouse in health and disease" Vol. 1 pp. 218–234 text-figs. 17–30.

Trilobus lomnickii sp. n. aus der „Siwa-Woda“; GROCHMALICKI Kosmos 36 pp. 372–376 4 text-figs.

Triodontophorus diminutus, occurrence in native, Nyassaland, description of female; LEIPER J. trop. Med. 11 pp. 181–184 4 text-figs.

Tylenchus biformis sp. n., attacking sugar-cane, pp. 63–72 figs. 34–41; COBB Exp. Sta. Hawaiian Sugar Pl. Ass. Div. Path. Physiol. Bull. No. 6.

(b) Nematomorpha.

(Vacant.)

(c) Acanthocephala.

Acanthocephala; LÜHE In: Die Süßwasserfauna Deutschlands hrsg. v. Brauer H. 16 pp. 1–60 87 text-figs.

Arhythmorhynchus gen. n. for *Echinorhynchus frassoni* Mol.; LÜHE Süßwasserf. Deutschl. p. 47.

Centrorhynchus nom. n. for *Paradoxites* Lindem.; LÜHE T.c. p. 41.

Echinorhynchus brumpti sp. n., from hedgehog, diagnosed; BLANC & CAUCHEMEZ C. R. Soc. Biol. 71 p. 120 1 fig.—*E. bufonis* and *tigrinae* Shipl., notes; PORTA Zool. Anz. 38 p. 377.

Filicollis gen. n. for *Echinorhynchus anatis* Schrank; LÜHE Süßwasserf. Deutschl. p. 30.

Polymorphus gen. n. for *Echinorhynchus minutus* Gze.; LÜHE T.c. p. 27.

Plagiorhynchus gen. n. for *Echinorhynchus lanceolatus* Linst.; LÜHE T.c. p. 25.

Rhadinorhynchus gen. n. for *Echinorhynchus pristis* Zed.; LÜHE T.c. p. 43.

CHAETOGNATHA, GASTRO-TRICHA, ROTIFERA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1603

Bibliography.

Bibliography of recent works on Rotifera and Gastrotricha, with brief abstracts and diagnoses of new species; de Beauchamp, 14.

Jahresbericht über Chaetognatha für 1909; Ritter Záhony, 309.

STRUCTURE. 1607

General.

ROTIFERA.

Comparison of the dimorphic females of *Asplanchna sieboldii*; Lange, 182.

Account of a new Rotifer, *Hyalocephalus trilobus* n. g., n. sp.; Lucks, 220.

Males of *Lacinularia reticulata* and *elliptica*; Shephard, 345.

Histology.

Remarques sur l'histologie des Rotifères (specialement d'*Eosphora*) à propos d'un travail récent (de Hirschfelder); de Beauchamp, 16.

PHYSIOLOGY. 1611

Environmental Effects.

The rôle of temperature, of the chemical composition of the medium, and of internal factors upon the ratio of parthenogenetic to sexual forms in *Hydatina senta*; Shull, 347.

REPRODUCTION. 1615

Life-history.

Postembryonic cycle of generations in *Asplanchna sieboldii* Leydig; connection of dimorphic females; Lange, 182.

Spermatogenesis, Oogenesis.

Further studies on reproduction in *Sagitta*; Stevens, 366.

ETHOLOGY. 1619

Plankton.

River Po, Rotifera in plankton; Padovani, 285.

Verteilung der Rädertiere in der Oka (Russ.); Voronkoff, 386.

Rotifera des Planktons der Halbinsel Jamal (Russ.); Voronkoff, 385.

Atlantic Ocean, die Chätognathen der Plankton-Expedition der Humboldt-Stiftung; Ritter-Záhony, 306.

VARIATION, PHYLOGENY. 1623

(Vacant.)

DISTRIBUTION. 1627

Europe.

Clare Island (W. Coast Ireland) Survey, Rotifera; Rousselet, 317.

Clare Island (W. Coast of Ireland), Rotifera Bdelloida; Murray, 255.

Coasts of Ireland, Chaetognatha; Ritter-Záhony, 305.

Tromsø, Rotifera; Lie-Pettersen, 207.

Bernese Oberland et Pays d'En-Haut vaudois, Rotifera; Delachaux, 65.

Lakes of Canton Neuchâtel, Rotifera; Thiébaud, 378.

Berent (West Prussia) in small peat bogs, associated with *Sphagnum*, a new Rotifer, *Hyalocephalus trilobus*; Lucks, 220.

Die Rotatorienfauna der flachen Tümpel Galiziens; Kozar, 181.

Verbreitung der Rotifera in Russland; Voronkoff, 386.

Rotifères de quelques lacs de l'Oural; Fuhrmann et Thiébaud, 106.

Africa.

South Africa, Bdelloid Rotifera, with new species; Murray, 256 & 262.

Australia.

Australia and New Zealand, collected by the Shackleton Antarctic Expedition, Rotifera; Murray, 257 & 261.

Victorian Rotifers; Shephard, 345.

America.

Canada (British Columbia and Ontario), Rotifera; Murray, 258.

Oaxaca and neighbourhood, Mexico, Rotifera (mostly *Callidina* spp.); Heinis, 154.

Oceanic.

North Atlantic, and North and Irish Seas, Chaetognatha; Apstein, 3.

Antarctic, National Expedition ("Discovery") Chaetognatha, and comparison with distribution as found by "Challenger"; Fowler, 87.

Chaetognatha, D. Südpolar Exped.; RITTER-ZÁHONY, 307.

Pacific Islands (Fiji and Hawaii), Rotifera; MURRAY, 259.

SYSTEMATIC.

1631

(a) Chaetognatha.

Chaetognatha, general systematic account; RITTER-ZÁHONY *In*: Das Tierreich hrsg. v. F. E. Schulze Lfg. 29 35 pp. 16 text-figs.

Chaetognatha of the German South Polar Exped., general systematic and faunistic account; RITTER-ZÁHONY Deutsche Südpolar-Expedition 1901-1903. Bd 13. H. 1. pp. 1-71 51 text-figs.

Die Chätognathen der Plankton-Expedition; RITTER-ZÁHONY *Ergebn. Plankton-Exp.* Bd 2 H. e 33 pp. 11 text-figs.

† *Amiskwia* gen. n. *sagittiformis* sp. n. p. 112 pl. 22 ff. 3 4, Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

† *Amiskwidae* fam. n. p. 112; WALCOTT T.c.

Heterokrohnia gen. n., *mirabilis* sp. n., Antarctic, described; RITTER-ZÁHONY D. Südpolar Exped. 13 i p. 42 text-figs. 46 & 47.

Sagitta friderici sp. n. Cape Verde, described; RITTER-ZÁHONY T.c. p. 19 text-figs. 13-17.—*S. elegans* var. n. *baltica*, occurrence and comparison with other forms; RITTER-ZÁHONY *Ergebn. Plankt. Exped. d. Humboldt-Stiftung* Bd 2 H. e p. 14 text-figs. 5-7.

(b) Gastrotricha.

(Vacant.)

(c) Rotifera.

Rotifera Bdelloida, Clare Island, notes; MURRAY Proc. R. Irish Acad. 31 (Clare Island Survey Pt. 52) 20 pp. 1 pl.

Rotifera (excluding Bdelloida), Clare Island, notes; ROUSSELET Proc. R. Irish Acad. 31 (Clare Island Survey Pt. 51) 10 pp.

Bdelloid Rotifera, South Africa, notes on; MURRAY Ann. Transv. Mus. 3 pp. 1-19 pls. i-iii.

Rotifera des Flusses Oka, Variationen (Russ.); VORONKOFF Dnevn. zool. otd. Obšč. liub. jest. 3 10 pp. 7-32 4 text-figs.

Rotifera, especially *Eosphora*, *Euchlanis*, remarks on histological points, apropos of Hirschfelder's work; DE BEAUCHAMP Zool. Anz. 37 pp. 289-293.

Anuracopsis navicula sp. n. Ceylon diagnosed; ROUSSELET J. Quek. Microsc. Cl. Ser. 2 11 p. 161 fig. 1.

Brachionus havanaensis, Illinois River, p. 163 fig. 3, *satanicus*, N. Dakota, p. 162 fig. 2, spp. n.; ROUSSELET T.c.

Asplancha ebbesbornii Hudson is syn. *A. sieboldii* Leydig; *A. s. ff. n. leydigii*, *ebbesbornii*, for the dimorphic females, described; LANGE Zool. Anz. 38 pp. 433-440 4 text-figs.

Brachionus lyratus pl. xxi figs. 5 & 6, *dichotomus* pl. xxii figs. 3 & 4, spp. n. Victoria; SHEPARD Proc. R. Soc. Vict. N. S. 24 p. 57.

Callidina bullata p. 6 pl. ii fig. 10, *gunningi* p. 8 fig. 11, *hewitti* p. 9 fig. 12, *plicatula* p. 9 pl. i fig. 7, spp. n., South Africa; MURRAY Ann. Transv. Mus. 3. — *C. punctata* p. 5 pl. ii fig. 11, *allani* p. 6 pl. i fig. 2, spp. n., South Africa; MURRAY J. R. Microsc. Soc. 1911.— *C. armillata* p. 168 pl. iv fig. 2, *lepida* p. 168 fig. 3, *longistyla* p. 169 fig. 4, *serrulata* p. 170 pl. v fig. 7, *mirabilis* p. 170 fig. 8, spp. n., Australia; MURRAY T.c.— *C. asperula* p. 289 pl. viii fig. 11, *canadensis* p. 289 pl. vi fig. 4, spp. n. Canada; MURRAY T.c.— *C. pacifica* sp. n., Fiji; MURRAY T.c. p. 430 pl. xiv fig. 3.— *C. microcornis* sp. n., New Zealand, Australia; MURRAY T.c. p. 577 pl. xvi fig. 4.

Dissotrocha pectinata sp. n., Cape Town; MURRAY J. R. Microsc. Soc. 1911 p. 586 pl. xvi fig. 3.

Euchlanis alata sp. n. p. 210 figs. 2-4, Halbinsel Jamal; VORONKOFF St. Petersburg Ann. mus. zool. Ac. sc. 16.

Habrotrocha caudata p. 10 pl. i fig. 1, *ampulla* p. 11 pl. ii fig. 6, *acornis* p. 13 fig. 7, *appendiculata* p. 14 pl. i fig. 4, *brocklehursti* p. 15 fig. 5, *auriculata* p. 16

pl. ii fig. 8, *spp. n.* South Africa; MURRAY J. R. Microsc. Soc. 1911.—*H. strangulata* *sp. n.*, Australia; MURRAY T.c. p. 172 pl. iv fig. 6.—*H. maculata* *sp. n.*, Canada; MURRAY T.c. p. 292 pl. viii fig. 12.—*H. nodosa* *sp. n.*, Fiji; MURRAY T.c. p. 431 pl. xv fig. 8.—*H. cucullata* *sp. n.* South Africa, diagnosed; MURRAY Ann. Transv. Mus. 3 p. 13 pl. iii fig. 20.

Hyalocephalus *gen. n.* (near *Acyclus*), *trilobus* *sp. n.*, occurrence and description; LUCKS Zool. Anz. 38 pp. 568–571 2 text-figs.

Mniobia scabrosa *sp. n.* Tropical Africa; MURRAY J. R. Microsc. Soc. 1911 p. 9 pl. ii fig. 10.—*M. obtusicornis* p. 291 pl. viii fig. 13, *montium* p. 291 fig. 14, *spp. n.* Canada; MURRAY T.c.

Philodina australis *sp. n.*, Sydney, also Vancouver; MURRAY J. R. Microsc. Soc. 1911 p. 167 pl. iv fig. 1.

Pleuretra africana *sp. n.*, occurrence and diagnosis; MURRAY Ann. Transv. Mus. 3 p. 4 pl. i fig. 2.

Rotifer curtipes p. 578 pl. xvii fig. 8, *montanus* p. 578 fig. 7, *spp. n.*, New Zealand; MURRAY J. R. Microsc. Soc. 1911.

ANNELIDA, GEPHYREA, PTEROBRANCHIATA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL.

1803 Bibliography.

Jahresbericht über Polychaeta und Archiannelida für 1909; NÄGLER, 264.

Jahresbericht über Oligochaeta für 1909; MICHAELSEN, 236.

Jahresbericht über Gephyrea und Hirudinea für 1909; SCHEPOTIEFF, 323.

Economics.

INJURY AND DISEASE.

Castration in *Lumbricus herculeus* due to marked Bacterial invasion; SOLLAS, 355.

Néoformations papillomateuses chez une Annélide (*Potamilla torelli*) dues probablement à l'influence de parasites (Haplosporidie et levure); MESNIL et CAULLERY, 233.

Technique.

Narcotization and preservation of Annelids; TREADWELL, 380.

STRUCTURE. 1807

General.

ARCHIANNELIDA.

Sexual dimorphism in *Dinophilus gyrotilatus*; SHEARER, 344.

CHAETOPODA.

Account of *Arenicola glacialis* Murdoch; ASHWORTH, 9.—General description of *Arenicola loveni* Kinberg; ASHWORTH, 10 & 11.

Description of *Enchytraeus minimus* Bret.; FRIEND, 88.

Innere Organisation von *Lumbri-cillus minutus* und *Marionina semifusca*; MICHAELSEN, 235.

Some disputed points in the anatomy of an Indian earthworm (*Pheretima posthuma*); LLOYD & POWELL, 213.

Detailed account of the Sphaerodorid Polychaete *Ephesia gracilis* Rathke; RUDERMANN, 320.

Morphology of *Glycera goesi*; VOIT, 384.

Sur le dimorphisme sexuel chez les Capitellins (*Isomastus perarmatus* n. g., n. sp.); GRAVIER, 138.

Structure of a phosphorescent Bermudan Annelid, *Odontosyllis enopla* Verrill; GALLOWAY & WELCH, 111.

Beschreibung einer neuen *Ctenodrilus*-art (*Zeppelinia branchiata*); SOKOLOV, 354.—Notes on structural details of *Zeppelinia* (*Raphidrilus nemasoma*); SOKOLOV, 353.

Beiträge zur Kenntnis der Tomopteriden; NÄNNI, 263.

MYZOSTOMIDA.

Account of *Myzostoma cysticolum* v. Graff; STUMMER-TRAUNFELS, 372.

ECHIUROIDEA.

Quelques observations sur la Bonellie; Błędowski, 23.

PTEROBRANCHIATA.

Account of *Cephalodiscus nigrescens* Lank. and *C. hodgsoni* n. sp.; Ridewood, 304.

Tegumentary Organs.

Beiträge zur Anatomie einiger Lumbriciden (*Eisenia* and *Helodrilus*) (Ungarisch); Szűts, 375.

Formation and arrangement of the opercular chaetae of *Sabellaria* (*alveolata* and *spinulosa*); Watson, 389.

The "suckers" of the *Myzostomidae*; Boulenger, 27.

Locomotor Organs.

Caudal parapodia of *Tomopteris apsteini*; Malaquin & Carin, 224.

Excretory Organs.

Der Wimpertrichter der Lumbriciden und die lymphoiden Anschwellungen an den Nephridien (bei *L. agricola*); Rosen, 314.

Musculature.

Zahl und Befestigung der Spindelmuskeln bei *Phascolosoma*-Arten; Gadd, 107.

Nervous System.

Nervous system of Hirudinea; Ascoli, 7.

Ueber den Golgi-Kopsch'schen Apparat der Nervenzellen bei den Hirudineen und *Lumbricus*; Bialkowska & Kulikowska, 21.

Hirudo medicinalis, variazione delle sue neurofibrille; Rebizzi, 301.

Histology.

Histological account of *Isochaeta virulenta* n. g., n. sp., and remarks on other Tubificids; Pointner, 292.

Histology of *Ephesia gracilis*, Rathke; Rudermann, 320.

Histologie des ventouses secondaires de *Branchellion*; Lepeschkine, 205.

Sexual Organs and Cells.

Spermatophores of earthworms of the genus *Pheretima* (= *Perichaeta*); Beddard, 17.

Notes on sexual organs of Italian leeches; Dequal, 66 (1 pl.).

Lage der Geschlechtsöffnung bei *Haemopsis sanguisuga*; Sukačev, 374.

PHYSIOLOGY. 1811

Nutrition, Secretion, etc.

Proteolytic ferments in *Aphrodite aculeata*; Sellier, 337.

Movement.

Caudal parapodia of *Tomopteris apsteini*; Malaquin & Carin, 224.

Regeneration.

Physiology of regeneration in *Podarke obscura*; Morgulis, 248: The water-content in relation to regeneration in *Podarke obscura* at different periods; Morgulis, 249.

Phagocytosis.

Phagocytosis of spermatozoa in the female apparatus of *Pareudrilus pallidus*; lymphocytosis of spermatozoa in *Alma aloysii sabaudiae*; Cognetti de Martiis, 53.

Environmental Effects.

Altitude in relation to the size of worms; Friend, 100.

Reactions of earthworms to dry and to moist surfaces; Parker & Parshley, 286.

Effects of heat and cold on the motility and sensibility of certain Annelids (*Nereilepas* and *Arenicola*) and *Sipunculus*; Matisse, 229.

REPRODUCTION. 1815

Life-History.

Gestation and alternation of generations in *Parautolytus fasciatus*; Gravier, 135.

L'accroissement et les phases sexuelles et asexuelles de *Salmacina dysteri* Huxley; Malaquin, 222.

Methods of reproduction in the Syllids; Potts, 294 (26 text-figs.).

Regeneration.

Autotomie et régénération du corps et des élytres chez les Polynoidiens (*Halosydna gelatinosa* et *Lagisca extenuata*); constatation d'une disposition numérique complexe; Michel, 238.

Regeneration und Uebung. Versuche an *Amphiglena*; Schultz, 327.

Die Regeneration isolierter Segmente und kleiner Stücke von Würmern; Morgulis, 250.

Spermatogenesis, Oogenesis, etc.

Development of male and female eggs and the problem of sex-determination in *Dinophilus gyrotilatus*; Shearer, 344.

The formation of the spermatophore in *Arenicola* and the theory of the alternation of generations in animals; Downing, 75.

Studies of fertilization in *Nereis*. 1. The cortical changes in the egg: 2. Partial fertilization; Lillie, 208.

Oogenesi di *Tomopteris elegans*; Senna, 338.

Development.

Alcuni stadi di sviluppo di *Corynocephalus albomaculatus* (*Alciopina parasitica*); Granata, 134.

Postembryonic development and larval forms of *Nereis dumerilii*; Hempelmann, 155.

Experiments on the control of asymmetry in the development of the Serpulid, *Hydroides dianthus*; Zeleny, 399.

Irrégularités de la segmentation chez *Protula*; Soulier, 359.

Embryonale Entwicklung einer neuen *Ctenodrilus*art (*Zeppelinina branchiata*); Sokolow, 353 & 354.

Larval Forms.

The early larvae of *Nephtys hombergi* and *Glycera convoluta*; Fuchs, 103.

Pelagic development of a littoral or benthonic Polychaete (family *Hesionidae*); progenetic (precociously sexual) larva of a Spionid; Viguier, 381.

Pterobranchier (*Cephalodiscus*) und Bryozoen (Chilostomata), Vergleichung; Braem, 29.

ETHOLOGY. 1819

Habits, Behaviour, etc.

Points in the bionomics of Oligochaetes (" *Helodrilus oculatus*" Hoffm. and other forms); Friend, 93.

Biological observations on Oligochaetes of Neuchatel; Piguet, 290.

Growth, habits, etc. of *Nereis dumerilii*; Hempelmann, 155.

Habits of a phosphorescent Bermudan Annelid, *Odontosyllis enopla* Verrill; Galloway & Welch, 111.

Sur quelques particularités biologiques de la faune annélide des mers antarctiques; Gravier, 137.

Luminosity.

Leuchten von *Henlea nasuta* (Russ.); Suchoterin, 373.

Plankton.

Adriatische Actinotrochalarven; Stiasny, 368.

In plankton, Bay of Algiers, new forms of Polychaetes; Viguier, 381.

Commensalism.

Sur les Téphuses d'Algérie et leur commensal; Seurat, 343.

Parasitism.

Ectoparasitic on *Trionyx triunguis*, *Placobdella aegyptiaca* n. sp.; Harding, 152.

Oviposition.

Further experiments on the methods of egg-laying in *Amphitrite*; Scott, 331.

Parental Relations.

On the brood-chambers for protection of developing larvae in certain "Annélides incubateurs" (*Parauto-*

lytus fasciatus, *Eteone* n. sp.); **Gravier**, 135.

Mode of attachment of the young brood to the parent leech in *Clepsine* and *Hemiclepsis*; **Moltschanov**, 241: Attachment of young *Clepsine*-individuals to the mother-leech; **Bolsius**, 25 (1 text-fig.).

VARIATION, PHYLOGENY. 1823

Phylogeny.

Affinities of the *Sphaerodoridae*, with special reference to *Ephesia gracilis*; **Rudermann**, 320.

Pterobranchiata and Polyzoa, phylogenetic indications afforded by comparison of larval organs; **Braem**, 29.

DISTRIBUTION (GEOGRAPHY). 1827

1. Recent.

The angler as a factor in the distribution of earthworms; **Distant**, 71.

Zur Kenntniss der Verbreitungsverhältnisse der Eodrilaceen; **Michaelson**, 235.

Europe.

Distribution of British Oligochaetes; **Friend**, 95.

New British species of *Henlea*; **Friend**, 98.

Revised check-list of British earthworms; **Friend**, 89.

Oligochaetes new to Britain, including new forms; **Friend**, 94 & 97.

Annelids new to the Thames; *Helodrilus oculus*, *Paranaïs naidina* and *Monopylephorus elegans* **Friend**; **Friend**, 99.

In England (Cambridgeshire and near London), Dutrochet's land leech (*Trocheta subviridis*); **Norgate & Harding**, 270.

Near Buxton, *Enchytraeus minimus* **Bretsch.**; **Friend**, 88.

North of England, Enchytraeids, with *Fridericia humilis* n. sp.; **Friend**, 92.

Cumberland, Oligochaetes; **Friend**, 91.

Polychaetes new to the Clyde; *Leucodore* (*Polydora*) *ciliatus*, *Ophryotrocha puerilis* and *Amphitrite johnstoni*; **Gemmell**, 115.

Port Erin district (Isle of Man), Polychaeta; **Riddell**, 303.

Irish coasts, different parts, *Maladanidae* with *Nicomache maculata* and *Caesicirrus neglectus* n. spp.; **Arwidson**, 5.

Ireland, *Herpobdella atomaria*; **Southern**, 360.

Coasts of Ireland, Polychaeta; **Southern**, 361.

Mediterranean and Atlantic (voyages of "Hirondelle" and "Princess Alice"); *Tomopteridae*; **Malaquin & Carin**, 223: Polychaetes; **Fauvel**, 83.

Coast of Algeria ("Porcupine" Expedition), *Cirrhatulidae*; **McIntosh**, 240.

Italy, Hirudinea; **Dequal**, 66.

Alpi del Piemonte (Valle del Roja), Lombrichi; **Chinaglia**, 45.

Oligochaetenfauna der Gewässer von Graz; **Pointer**, 292.

Süßwasserbewohnende Borstenwürmer (*Oligochaeta limicola*) Galiziens; **Golański**, 124.

Holland, earthworms; **Friend**, 90.

Die Glyceriden der Nordsee; **Voit**, 384.

Die Nephthydeen und Lycorideen der Nord- und Ostsee, einschliesslich der verbindenden Meeresteile; **Heinen**, 153.

Wasseroligochaetenfauna Süd-Finlands; **Toivonen**, 379.

Hirudineen des Sadjerwsees (Livland); **Sukačev**, 374.

Gephyrea des Kola-Fjords, *Phascolosoma* spp. n.; **Gadd**, 107.

Asia.

Annélides Polychètes du golfe Persique recueillis par M. N. Bogoyawlensky; **Fauvel**, 82.

Aquatic Oligochaeta of the Indian Museum; **Stephenson**, 365.

India (Travancore), Oligochaeta; **Cognetti de Martiis**, 51.

Notopygos spp. n. and *Sangiria* gen. n.,
sp. n. from Malay Archipelago; **Horst**,
159.

Japanese species of *Chaetopterus*;
Izuka, 166.

Australia.

Hirudinea Südwest-Australiens;
Johansson, 168.

Africa.

South Africa, *Arenicolidae*; **Ash-**
worth, 11.

America.

The common fresh-water Oligochaeta
of the United States; **Galloway**, 110.

The Annelids of the family *Areni-*
colidae of North and South America;
Ashworth, 9.

Polychaeta from the Dry Tortugas,
Florida; **Treadwell**, 380.

Polychaetous Annelids dredged by
the U. S. S. "Albatross" off the coast
of southern California in 1904: 3.
Euprosynidae to *Goniadidae*; **Moore**,
246.

Southern Patagonia, Hirudinea;
Moore, 247.

Oceanic, Various.

Annelids from the Danmark-Expedi-
tion til Grønlands Nordøstkyst 1906-
1908; **Ditlevsen**, 73.

Litorale Oligochaeten des nördl.
Eismeeres; **Michaelsen**, 237.

Nuova Guinea, nuove spp. di
Pheretima; **Cognetti de Martiis**, 54.

Southern Shetlands and Petermann's
Isle (Antarctic expedition), a new
Capitellid, *Isomastus perarmatus*;
Gravier, 135.

Notes on the Polychaeta of the Ant-
arctic (French Expedition); **Gravier**,
136.

Annélides Polychètes, Iles Kerguelen,
voyage Rallier du Batz; **Gravier**,
139.

Maldaniden der Schwed. Südpolar-
Exped.; **Arwidsson**, 6.

Antarctic regions (Swedish expedi-
tion, 1901-1903), new Priapulids and
Sipunculids; **Théel**, 377.

2. Fossil.

The Carbonic fauna of the Magdalen
islands; **Beede**, 19.

Wewoka formation (Carboniferous,
Pennsylvania), Oklahoma, Annelids;
Girty, 122.

Moorefield shale (Mississippian), Ar-
kansas, Annelida; **Girty**, 121.

Middle Devonian, Wisconsin, Anne-
lida, Polychaeta; **Cleland**, 47.

Middle Cambrian, British Columbia,
Annelids and Gephyrea, with many
new forms; **Walcott**, 387.

SYSTEMATIC.

1831

1. ANNELIDA.

(a) Archiannelida (Vacant).

(b) Polychaeta.

Polychaetous Annelids dredged by
the U. S. S. "Albatross" off the coast
of southern California in 1904: 3.
Euprosynidae to *Goniadidae*; **MOORE**
Philadelphia Proc. Acad. Nat. Sci. 63
pp. 234-318 pls. xv-xxi.

Polychaeta (*Alciopinae*, *Tomopteri-*
dae and *Typhloscolecidae*), coasts of
Ireland, descriptive notes; **Southern**
Fish. Ireland Sci. Investig. 1910 No. III
pp. 1-37 3 pls.

Polychaeta from the Dry Tortugas,
Florida; **TREADWELL** Bull. Amer. Mus.
Nat. Hist. 30 pp. 1-12 29 text-figs.

The Annelids of the family *Areni-*
colidae of North and South America,
with key to American species; **ASH-**
WORTH Smithsonian Inst. Proc. U. S.
Nation. Mus. 39 (No. 1772) pp. 1-32
14 text-figs.

Polychaeta provenant des cam-
pagnes de l'*Hirondelle* et de la *Princesse*
Alice ou déposées dans le Musée
océanographique de Monaco; **FAUVEL**
Bul. Inst. océan. Monaco No. 194
41 pp. and text-figs.

Annélides Polychètes du golfe Per-
sique recueillis par M. N. Bogoyaw-
lensky; **FAUVEL** Arch. zool. Paris (sér.
5) 6 pp. 353-439 pls. xix-xxi.

Annelids from the Danmark-Expedition; DITLEVSEN Danmark-Ekspeditionen til Grønlands Nordøstkyst 1906-1908 5 Nr. 9 reprint of Medd. Grøn. 45 pp. 411-432 pls. xxvii-xxxi.

Die Nephythdeen und Lycorideen der Nord- und Ostsee, einschliesslich der verbindenden Meeresteile; HEINEN Wiss. Meeresunters. Abt. Kiel N.F. 13 pp. 1-87 1 Taf. u. 5 Kart.

†New Polychaeta, Middle Cambrian, British Columbia, described; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014) pp. 109-144 pls. xviii-xxiii.

Pelagic larvae of a Hesionid and a Spionid, development described and consideration of the indications of Annelid inter-relationships; VIGUIER Ann. Sci. Nat. Zool. Sér. 9 13 pp. 190-250 pls. vii-ix.

Alciopina parasitica Clpd. and Panc. (syn. *Corynocephalus albomaculatus* Lev.), stadii di sviluppo; GRANATA Monit. zool. ital. 22 pp. 151-158 4 text-figs.

†*Arabellites crescentum* sp. n. p. 45 pl. iv fig. 1, Devonian, Wisconsin; CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21.

Aracoda attenuata p. 5 text-figs. 8-14, *spatula* p. 6 figs. 12-14, spp. n., Florida; TREADWELL Bull. Amer. Mus. Nat. Hist. 30.—*A. semimaculata* sp. n. California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63 p. 295 figs. 143-149.

Arenicola glacialis Murdoch, Alaska, description; ASHWORTH Smithsonian Inst. Proc. U. S. Nat. Mus. 39 pp. 24-31 text-figs. 10-14.—*A. loveni* Kinberg, from Saldanha Bay, South Africa, described; ASHWORTH Ark. Zool. 7 No. 5 19 pp. 1 pl. also in Ann. S. Afric. Mus. 11 pp. 2-25 pl. i.

Aricia nuda sp. n., California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63 p. 311 figs. 172-176.

†*Autodetus apicatus* sp. n., Devonian-Wisconsin; CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. No. 21 p. 47 pl. iv fig. 4.

†*Aysheaia* gen. n. p. 116, *pedunculata* sp. n. p. 117 pl. xxiii figs. 8 & 9, Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

†*Aysheaidae* fam. n. p. 116; WALCOTT T.c.

Caesicirrus gen. n. (*Maldanidae*), *neglectus* sp. n. (" *Aziothea catenata* Malmgr."), Ireland, described; ARWIDSSON Proc. R. Irish Acad. 29 B pp. 217-224 pl. xvii pl. xviii figs. 10-12 and pl. xix figs. 20-26.

Callizona bongraini sp. n. Antarctic, name only; GRAVIER C. R. Acad. Sci. 153 p. 694.

†*Canada* gen. n. p. 118, *spinosa* p. 118 pl. xxiii figs. 4-7, *setigera* p. 119 figs. 1-3, *sparsa* p. 119, *dubia* p. 119, *irregularis* p. 120, spp. n., Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

Canadidae fam. n. p. 117; WALCOTT T.c.

Chaetopterus takahashii, *kagoshimensis*, spp. n., Japan; IZUKA Dobuts. Z. 23 pp. 431-435 with pl.

Chaetozone dummanni, Ireland, p. 160, *zetlandica*, Shetland, p. 161, spp. n., diagnosed; M'INTOSH Ann. Mag. Nat. Hist. Ser. 8 7.—*C. carpenteri* sp. n., Bono Bay, Algiers, diagnosed; M'INTOSH T.c. p. 166 pl. vi fig. 5.—*C. whiteavesi* sp. n., St. Lawrence Gulf; M'INTOSH T.c. p. 169 pl. vii fig. 10.

Chloeia pinnata sp. n., California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63 p. 239 figs. 1-6.

Cirrhatulidae, British, notes on; M'INTOSH Ann. Mag. Nat. Hist. Ser. 8 7 pp. 151-162 figs.

Cirrhatulispio gen. n. prov., for a form off Irish coast, characters; M'INTOSH T.c. p. 167 pl. vi fig. 7.

Cirrhatulus tessellatus sp. n., off coast of Algeria, characterized; M'INTOSH T.c. p. 162 pl. v fig. 2.

Clymenella (?) *minor* sp. n. Falkland-Inseln; ARWIDSSON Schwed. Südpolar-Exped. 6 6 p. 24 pl. i figs. 17-22 pl. ii figs. 44-46.

Conularia crustula var. n. *holdenvillae*, Carboniferous, Oklahoma; GIBBY New York N.Y. Ann. Acad. Sci. 21 p. 125.

Diopatra ornata sp. n., California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63 p. 273 figs. 77-85.

Dilonereis falcata sp. n., California; MOORE T.c. p. 298 figs. 150-154.

Enapteris gen. n. (Tomopteridae),
typ. *Tomopteris euchaeta* Chun; ROSA
Firenze Pubbl. Ist. studi sup. 1908
Raccolte planctoniche etc. 1 5 p. 262.

†*Enchostoma bicarinatum* sp. n.,
Mississippian, Arkansas; Girty U. S.
Geol. Surv. Bull. No. 439 p. 28 pl. x
fig. 1.—*E. serpuliforme* sp. n. Carboni-
ferous, Oklahoma; Girty New York
N.Y. Ann. Acad. Sci. 21 p. 123.

Eone (perhaps only a subgen. of
Goniada) *longepapillata* sp. n., North
Sea; VOIT Wiss. Meeresunters. Abth.
Kiel. N.F. 13 p. 114 text-figs. 11 & 12.

Ephesia gracilis Rathke, morpho-
logie, anatomie, histologie, affinités;
RUDERMANN Mém. soc. zool. 24 pp. 1-
96 pl. i & 50 text-figs.

Eteone n. sp., notes on; GRAVIER
C. R. Acad. Sci. 152 p. 1419.

Eunice gravieri sp. n., Atlantic,
diagnosed; FAUVEL Bull. Inst. océan.
Monaco No. 194 p. 14 text-figs. 1 & 2.—
E. multipectinata sp. n., California;
MOORE Philadelphia Proc. Acad. Nat.
Sci. 63 p. 248 figs. 20-23.

Euphrosyne dumosa p. 235 figs. 12-
17, *limbata* p. 237 figs. 7-11, spp. n.,
California; MOORE T.c.

Glyceria branchiopoda sp. n. p. 302
figs. 155-159, *alba* Rathke var. n.
macrobranchia p. 301, California;
MOORE T.c.—*G.* and *Goniada* spp. from
North Sea, systematic notes and
occurrence; VOIT Wiss. Meeresunters.
Abt. Kiel N.F. 13 pp. 89-125 1 Karte.

Glycinde armigera sp. n., California;
MOORE Philadelphia Proc. Acad. Nat.
Sci. 63 p. 307 figs. 160 & 171.

Harmothoe capitulifera sp. n.; DIT-
LEVSEN Danmark Eksped. til Grøn-
lands Nordøstkyst No. 5 & Medd. Grøn-
l. 45 p. 416 pl. xxvii figs. 1 3 & 4 pl.
xxxi figs. 25-29.

Heterocirrus gravieri sp. n., off Cadiz,
diagnosed; M'INTOSH Ann. Mag. Nat.
Hist. Ser. 8 7 p. 164 pl. vi fig. 3.

Heteronereis sp. from East Java,
notes on; HORST Leiden Notes Mus.
Jentink 33 pp. 113-116 5 text-figs.

Hyalinoecia juvenalis sp. n. p. 277
figs. 86-95, *tubicola* (Müll.) var. n.
stricta p. 280 figs. 96 & 97, California;
MOORE Philadelphia Proc. Acad. Nat.
Sci. 63.

Isomastus gen. n. (Capitellidae) *perar-*
matus sp. n., occurrence and description
(N-9186 o)

of sexually dimorphic forms; GRAVIER
C. R. Acad. sci. 153 pp. 1162-1164.

Lumbriclymenella gen. n. (nahe *Lum-*
briclymene) p. 2, *robusta* sp. n. p. 3
pl. i figs. 1-4 pl. ii figs. 32-36, Süd-
Georgien; ARWIDSSON Schwed. Süd-
polar-Exped. 6 Lief. 6.

Lumbrinereis minuscula nom. n. for
Lumbriconereis minuta Treadwell p.
294; MOORE Philadelphia Proc. Acad.
Nat. Sci. 63.—*L. inflata* sp. n. p. 289
figs. 128-134, *japonica* v. Marenz. var.
n. *index* p. 288 figs. 119-127, Cali-
fornia; MOORE T.c.

Maldane sarsi var. *antarctica* var. n.
Graham-region and Süd-Georgien; AR-
WIDSSON Schwed. Süd-polar-Exped. 6
6 p. 32 pl. i figs. 23-26 pl. ii figs. 50-54.

Maldanidae der Schwed. Süd-polar-
Exped., beschrieben; ARWIDSSON T.c.
pp. 1-44 pls. i & ii.

Marphysa conferta sp. n., California;
MOORE Philadelphia Proc. Acad. Nat.
Sci. 63 p. 252 figs. 29-34.—*M. fragilis*
sp. n. Florida; TREADWELL Bull.
Amer. Mus. Nat. Hist. 30 p. 2 text-
figs. 1-7.

†*Miskoia* gen. n. *preciosa* sp. n.
Cambrian, British Columbia; WAL-
COTT Smithsonian Inst. Misc. Collect.
57 No. 5 (Pub. 2014) p. 114 pl. xviii
figs. 1-5.

†*Miskoidae* fam. n. p. 113; WAL-
COTT T.c.

Nephtys classificatory key to species
p. 9, distribution of species in North
Sea and Baltic pp. 64-74, notes on
pp. 10-36, *incisa* var. n. *bilobata* p. 25,
N. ehlersi sp. n. p. 34 figs. 1 & 2, diag-
nosed; HEINEN Wiss. Meeresunters.
Abth. Kiel N.F. 13.—*N. hombergi* and
Glyceria convoluta, early larval stages;
FUCHS Plymouth J. Mar. Biol. Ass.
N.S. 9 pp. 164-170 10 text-figs.

Nereis dumerilii, Naturgeschichte,
postembryonale Entwicklung, Gesch-
lechtsreife, Metamorphose, u.s.w.;
HEMPELMANN Zoologica H. 62 (= Bd
25 Lfg 1) 135 pp. 4 Taf.—*N.*, classifica-
tory key to species p. 42, distribution
and notes on forms occurring in North
Sea and Baltic pp. 43-61, *reibischi*
sp. n. p. 53 figs. 7-10; HEINEN Wiss.
Meeresunters. Abth. Kiel N.F. 13.—
N. zonata Mgr. var. n. *persica* p. 385
pl. xix figs. 10-16; FAUVEL Arch.
Zool. exp. (ser. 5) 6.

†*Nereites berneyi* sp. n., trail of;
DE VIS Ann. Queensland Mus. 10 pp. 12-14.

Nevaya gen. n. (allied to *Sclerocheilus* Grube) *whiteavesi* sp. n., Gulf of St. Lawrence, diagnosed; M'INTOSH Ann. Mag. Nat. Hist. Ser. 8 7 p. 149 pl. v fig. 1.

Nicomache maculata sp. n. ("N. lumbricalis Fabr."), Ireland, described; ARWIDSSON Proc. R. Irish Acad. 29 B pp. 209-214 pl. xviii figs. 13-19 pl. xix figs. 27-30.

Ninoe gemmea p. 283 figs. 101-109, *fusca* p. 285 figs. 110-118, spp. n., California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63.

Nothria pallida p. 256 figs. 24-28 35-37, *hiatidentata* p. 259 figs. 41-50, spp. n., California; MOORE T.c.

Notoproctus oculatus var. *antarctica* var. n. Graham-region; ARWIDSSON Schwed. Südpolar-Exped. 6 6 p. 8 pl. ii figs. 37 & 38.

Notopygos diagnostic key to species p. 242, *gigas* p. 244, *sibogae* p. 245, *cirratus* p. 246, spp. n., Malay Archipelago; HORST Leiden Notes Mus. Jentink 33.

Odontosyllis enopla Verrill, habits, classification, morphology and minute anatomy; GALLOWAY & WELCH Trans. Amer. Microsc. Soc. 30 pp. 13-39 pls. i-v.

Onuphis parva p. 263 figs. 51-57 98 & 99, *vevillaria* p. 266 figs. 69-76, *nebulosa* p. 269 figs. 58-68, spp. n., California; MOORE Philadelphia Proc. Acad. Nat. Sci. 63.

Parautolytus fasciatus Ehlers, notes on gestation, alternation of generations; GRAVIER C. R. Acad. Sci. 152 pp. 1418 & 1419.

Pariospilus gen. n. (*Phyllodocidae* near to *Iospilus*) *affinis* sp. n., diagnosed; VIGUIER Ann. Sci. Nat. (Zool.) Sér. 9 13 p. 250.

Pelagobia viguieri sp. n., Antarctic, name only; GRAVIER C. R. Acad. Sci. 153 p. 694.

Phalacrostemma elegans sp. n., Atlantic, off Portugal, diagnosed; FAUVEL Bul. Inst. Océan. Monaco No. 194 p. 31 text-fig. 3.

Pherecardia lobata, synonymy and diagnosis; HORST Notes Mus. Jentink 34 pp. 17-21 1 text-fig.

†*Pollingeria* gen. n. p. 124, *grandis* sp. n. p. 125 pl. xxi figs. 7-9, Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

Praxillella antarctica sp. n. Graham-region; ARWIDSSON Schwed. Südpolar-Exped. 6 6 p. 19 pl. i figs. 12-15 pl. ii figs. 42 & 43.

Quetieria gen. n. (*Aphroditidae*) *pelagica* sp. n., described and compared with other pelagic *Aphroditidae*; VIGUIER Ann. Sci. nat. (Zool.) Sér. 9 13 p. 252.

Rhodine intermedia sp. n. Süd-Georgien; ARWIDSSON Schwed. Südpolar-Exped. 6 6 p. 11 pl. i figs. 5-11 pl. ii figs. 39-41.

Salmacina dysteri Huxley, l'accroissement et les phases sexuelles et asexuelles; MALAQUIN Zool. Ann. 37 pp. 197-208.

Sangiria gen. n. (*Amphinomidae*) *hystrix* sp. n., Malay Archipelago; HORST Leiden Notes Mus. Jentink 33 p. 246.

†*Selkirkia* gen. n. (type *Orthotheca major* Walcott) p. 120, *fragilis* p. 122 pl. xix fig. 8, *gracilis* p. 122 pl. xix fig. 9, spp. n., Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

†*Serpula felisii* sp. n. Unterer Tertiär, Barcelona; OPPENHEIM Zs. D. geol. Ges. 1911 Monatsber.—*S. verrucosa* p. 259 pl. ii fig. 1, *africana* p. 259 pl. ii fig. 2, spp. n.; DARESTE DE LA CHAVANNE Bull. Carte géol. d'Algérie Sér. 4 No. 4 1910.—*S. (?) infinitesima* sp. n. p. 176 2 figs., Carboniferous, Magdalen Is.; BEEDE N. Y. St. Mus. Bull. No. 149.

†*Serpulopsis* gen. n. type *Serpula insita*, Carboniferous, Oklahoma; Girty New York N.Y. Ann. Acad. Sci. 21 p. 124.

Streblosoma verrilli sp. n. Florida p. 11 text-figs. 27-29; TREADWELL Bull. Amer. Mus. Nat. Hist. 30.

Syllides verrilli Moore, affinities with *Staurocephalidae*; M'INTOSH Ann. Mag. Nat. Hist. Ser. 8 7 pp. 145-148.

Tomopteridae, specification of family and genera; notes on forms obtained by "Hirondelle" and "Princess Alice"; MALAQUIN Bul. Inst. océan. Monaco No. 205 16 pp.—*Tomopteridi*; ROSA Firenze Pubbl. Ist. studi sup. 1908

Raccolte planctoniche etc. 15 pp. 245-327 tav. xii.

Tomopteris apsteini nom. nov. (f. *T. scolopendra* Keferstein: Apstein); ROSA T.c. p. 288.—*T. a. Rosa*, Banyuls, caudal parapodia and other features described; MALAQUIN & CARIN Arch. Zool. Sér. 5 8 pp. xviii-cii 4 text-figs.—*T. spp.*, Beiträge zur Kenntnis; NANNI Jenaische Zs. Natw. 47 pp. 343-366 Taf. xvii & xviii.

Tylonereis gen. n. (*Nereidae*) p. 376, *bogojawlenskii* sp. n., Persian Gulf, described, p. 376 pl. xix figs. 1-7; FAUVEL Arch. Zool. exp. (sér. 5) 6.

† *Wiwaxia* gen. n. p. 123 (type *Orthotheca corrugata* Matthew), Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

† *Wiwaxidae* fam. n. p. 123; WALCOTT T.c.

† *Worthenella* gen. n. p. 125, *cambria* sp. n. p. 126 pl. xxii fig. 2, Cambrian, British Columbia; WALCOTT T.c.

Zeppelinina branchiata sp. n. Neapel, Anatomie, Entwicklung; SOKOLOV Zs. wiss. Zool. 97 pp. 546-603 pls. xxvii-xxix.

(b) Myzostomida.

Myzostoma cysticolum v. Graff and *M. antarcticum* sp. n., described; v. STUMMER-TRAUNFELS National Antarctic Expedition Nat. Hist. vol. 4 pp. 1-26 1 pl.—*M. spp. (costatum, moebianum)*, the number of pairs of suckers; BOULENGER Zool. Anz. 37 pp. 346-351 2 text-figs.

(c) Oligochaeta.

Oligochaeta, neighbourhood of Graz, systematic notes; POINTNER Zs. wiss. Zool. 98 pp. 627-645.

Oligochaeta der russischen Nordküste, Beschreibung; MICHAELSEN St. Petersburg Trav. Soc. nat. C. r. séances 42 pp. 1-94 106-110.

Fresh-water Oligochaeta of the United States, occurrence, classificatory key to genera and species; GALLOWAY Trans. Amer. Microsc. Soc. 30 pp. 285-317 14 text-figs.

Aeolosoma bengalense Calcutta, diagnosed; STEPHENSON Rec. Ind. Mus. 6 p. 204.

Aporrectodea similis sp. n., Kew, diagnosis and distinctions from *A. chlorotica*; FRIEND Naturalist 1911 p. 396 3 text-figs.

Chaetogaster palustris sp. n., Graz, diagnosed; POINTNER Zs. wiss. Zool. 98 p. 629 pl. xxviii fig. 2.—*C. spongillae* Annd., notes on; STEPHENSON Rec. Ind. Mus. 6 p. 205.

Dendrobaena meriensis sp. n., Derbyshire, note on; FRIEND Zoologist Ser. 4 15 pp. 192 & 193.

Dero tubicola sp. n., Graz, diagnosed; POINTNER Zs. wiss. Zool. 98 p. 631 pl. xxviii fig. 5.

Dichogaster tamiana sp. n. Nuova Guinea; COGNETTI DE MARTIS Boll. Musei zool. anat. 26 No. 641 p. 6.

Drawida jakir sp. n., Travancore; COGNETTI DE MARTIS Ann. Mag. Nat. Hist. Ser. 8 7 p. 495 pl. xiii figs. 1-3.

Enchytraeus exiguus sp. n., Thames mud; FRIEND Naturalist 1911 p. 415.—*E. minimus* Bretsch., occurrence in England, description; FRIEND J. R. Microsc. Soc. 1911 pp. 730-734 pl. xxviii figs. 1-3.

Eodrilus tecum-umami p. 550 pl. xv figs. 3-5, *irpex* p. 555 figs. 6-9, *eiseni* p. 559 figs. 1 & 2, *hamiger* p. 563 figs. 12-15, spp. n., Guatemala, diagnosed; MICHAELSEN Zool. Jahrb. Abth. Syst. 30.

Fridericia humilis sp. n., Derbyshire, diagnosed; FRIEND Naturalist 1911 p. 291.—*F. peruviana* sp. n., brief account; FRIEND J. R. Microsc. Soc. 1911 pp. 734-736 pl. xxviii fig. 4.—*F. pulchra* sp. n., Kew; FRIEND Naturalist 1911 p. 415.

Helodrilus (Dendrobaena) octaedrus var. n. *casterinensis*, diagnosed; CHINAGLIA Boll. Musei Zool. Anat. 26 No. 635 p. 4.—*H. oculatus* Hoffm., probably syn. *Allolobophora hermanni* Mich.; FRIEND Naturalist 1911 p. 395.

Henlea perpusilla sp. n., Ashby-de-la-Zouch, and note; FRIEND Zoologist Ser. 4 15 pp. 466 & 467, also Naturalist 1911 p. 320.

Isochaeta gen. n. (*Tubificidae*, near *Limnodrilus*), *virulenta* sp. n., Graz, diagnosis and histological account; POINTNER Zs. wiss. Zool. 98 pp. 637 646-668 pls. xxviii & xxix.

Limnodrilus aurantiacus sp. n., Thames mud; FRIEND Naturalist 1911 p. 414 4 text-figs.

Megascolex eunephrus p. 498 pl. xiii figs. 5-7, *ratus* p. 500 figs. 8-10, **spp. n.**, Travancore, diagnosed; COGNETTI DE MARTIIS Ann. Mag. Nat. Hist. Ser. 8 7.

Nais pectinata Steph. var. *r. inaequalis*, diagnosed; STEPHENSON Rec. Ind. Mus. 6 p. 208 text-fig. 2.

Ocotolasmus frivaldszkyi Örley, selbstständige Art; SZÜTS Allatt. Közlem. 10 pp. 143 & 170.

Pheretima cyclops p. 1, *aberrans*, *flabellifera*, *tavvarinensis*, p. 2, *beaufortii*, *ontrekensis*, p. 3, *wendessiana*, *myrithasta*, p. 4, *jochana*, *sentanensis*, *monopera*, p. 5, *colossus* p. 6, **spp. n.**, Nuova Guinea; COGNETTI DE MARTIIS Boll. Musei zool. anat. 26.

Plutellus timidus **sp. n.**, Travancore, India; COGNETTI DE MARTIIS Ann. Mag. Nat. Hist. Ser. 8 7 p. 497 p. xiii fig. 4.

Polytoreutus baralypton **sp. n.**, Nairobi, described; COGNETTI DE MARTIIS Ann. Mag. Nat. Hist. Ser. 8 7 pp. 507-509 2 text-figs.

Raphidrilus Monticelli *vide* Zepelinia.

Trigaster minima **sp. n.**, Kew (really from Peru), diagnosed; FRIEND Zoologist Ser. 4 15 pp. 274 & 275.—*T. m.*, compared with *T. lankesteri*; ID. Naturalist 1911 p. 416.

Zeppelinia (*Raphidrilus*) *nemasoma* (Montic.) (syn. *Z. branchiata* Sok.), comparison of morphological details; SOKOLOV Zool. Anz. 38 pp. 222-226.

(d) Hirudinea.

Hirudinea of southern Patagonia; MOORE Rep. Princeton Univ. Exp. Patagonia 1896-1899 3 (Zool.) pp. 669-687 pls. xlix l.

Hirudinea; JOHANNSON In: Fauna Südwest-Australiens Bd. 3 Lfg 12 pp. 407-431 10 text-figs.

Clepsine (*Glossiphonia*) *duplicata* p. 675 fig., *simplex* p. 681 fig., Patagonia, **spp. n.**; MOORE Rep. Princeton Univ. Exp. Patagonia 3.

Ichthyobdella australiensis **sp. n.**, Australia, diagnosed; JOHANNSON Fauna Südwest-Australiens 3 Lfg 12 p. 418 text-fig. 7.

Placobdella aegyptiaca **sp. n.**, diagnosed; HARDING Ann. Mag. Nat. Hist. Ser. 8 7 pp. 388 & 389 1 text-fig.

Platybdella michaelsoni **sp. n.**, Australia, described; JOHANNSON Fauna Südwest-Australiens 3 Lfg 12 pp. 413-418 text-figs. 2-6.

(e) Echiuroidea (Vacant).

2. GEPHYREA.

† *Banffia* **gen. n.** (*Othoidae*) *constricta* **sp. n.**, Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014) p. 130 pl. xxi figs. 5 & 6.

† *Oesia* **gen. n.** (*Pikaidae*) p. 132, *disjuncta* **sp. n.**, Cambrian, British Columbia; WALCOTT T.c. p. 133 pl. xx figs. 3-5.

† *Ottoia* **gen. n.** p. 128, *prolifera* p. 128 pl. xix figs. 1-5, *minor* p. 129 pl. xxii figs. 5 & 6, *tenuis* p. 130, **spp. n.**, Cambrian, British Columbia; WALCOTT T.c.

† *Othoidae* **fam. n.** p. 128; WALCOTT T.c.

Phascolosoma anderssoni p. 28 pl. iii figs. 28-34 & pl. v figs. 71-74, *ohlini* p. 29 pl. ii figs. 21-23 pl. iii figs. 24-27 & pl. v figs. 69 & 70, *nordenskjöldi* p. 30 pl. iii figs. 35-41, **spp. n.**, Swedish Antarctic Exped.; THÉEL Vet.-Ak. Handl. 47 No. 1.—*P. kolense* pp. 80 & 102 pl. i figs. 1-8, *derjugini* pp. 82 & 103 figs. 9-14, **spp. n.**, Kola-Fjord; GADD St. Peterburg Trav. Soc. nat. C. r. séances 42.

† *Pikaia* **gen. n.** p. 131, *gracilens* **sp. n.** p. 132 pl. xx figs. 1 & 2, Cambrian, British Columbia; WALCOTT Smithsonian Inst. Misc. Collect. 57 No. 5 (Pub. 2014).

† *Pikaidae* **fam. n.** p. 131; WALCOTT T.c.

Priapulius horridus **sp. n.**, Coast of Uruguay, THÉEL Stockholm Vet.-Ak. Handl. 47 No. 1 p. 24 pl. ii figs. 13-19.

3. PHORONIDEA (Vacant).

4. PTEROBRANCHIATA.

Cephalodiscus, relationships between genus and *Rhabdopleura*, different species characterized, *C. nigrescens* Lank. and *C. hodgsoni* **sp. n.**, Antaretic, full description; RIDGEWOOD National Antarctic Expedition Natural Hist. vol. 2 pp. 1-67 7 pls.

VII. BRACHIOPODA AND BRYOZOA

ARRANGED BY

F. W. EDWARDS.

(a) BRACHIOPODA

CONTENTS.

	PAGE
I. TITLES	2
II. SUBJECT INDEX.. .. .	5
General = 2003	5
Structure = 2007	5
Physiology = 2011 (vacant)	
Development = 2015 (vacant)	
Ethology = 2019	5
Variation and Aetiology = 2023 (vacant)	
Distribution:—	
(a) Recent	5
(β) Fossil	5
III. SYSTEMATIC INDEX = 2031	7

I.—TITLES.

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II.—SUBJECT INDEX.

GENERAL. 2003

Expeditions.

Deutsche Süd-polar Expedition 1901-1903; Eichler, 16.

"Discovery" Antarctic Exp.; Smith, 51.

Duc d'Orléans Campagne Arctique de 1907; Dautzenberg & Fischer, 10.

STRUCTURE. 2007

Syringopleura; Girty, 23.

Internal structure of Mississippian Rhynchonelliform shells; Weller, 62.

Liothyrina antarctica, Spicule im Armapparat; Eichler, 16, p. 397.

ETHOLOGY. 2019

Parasitism.

A Fungus (*Palaeachlya*) parasitic on the Cambrian *Lingula lewisii*; Chapman, 5.

DISTRIBUTION. 2027

(α) RECENT.

Bermuda, sp. n. *Argyrotheca*; Dall, 9.

Arctic, occ. *Rhynchonella psittacea*, *Waldheimia cranium*; Dautzenberg & Fischer, 10.

Antarctic, spp. n. *Magellania*; Smith, 51.

Antarctic, spp. descr. and fig.; Eichler, 16.

(β) FOSSIL.

Cambrian.

England (Shropshire), sp. n. *Billingella*; Matley, 39.

India (Spiti); spp. n. *Nisusia*, *Lingulella*, *Acrotreta*, *Acrothele*; Reed, 47.

China, spp. n. *Acrotreta*, *Lingulella*, *Micromitra*; Walcott, 61.

Australia (Victoria), sp. n. *Orthis* (*Plectorthis*) *platystrophoides*; Chapman, 6.

Ordovician.

United States (Ohio, Indiana, Kentucky, Tennessee), spp. n. *Lingula*, *Cyclocoelia*, *Rafinesquina*, *Platystrophia*; Foerste, 17.

United States (Mississippi Valley), spp. n. *Strophomena*, *Dalmanella*, *Plectorthis*, *Eridorthis* (subgen. n.); Foerste, 18.

United States (Mississippi Valley), spp. n. *Rhynchotrema*, *Strophomena*, *Dimorthis*; Foerste, 19.

United States, Chazy fauna, sp. n. *Hebertella*; Raymond, 45

Silurian.

Wales (Montgomery), sp. n. *Lingula*; Wade, 60.

Portugal, lists; Delgado, 11.

United States (Tennessee, Indiana and Illinois), 20 spp. n.; Foerste, 20.

United States and Canada (Ontario, Michigan and Ohio), spp. n. *Hindella*, *Meristina*, *Meristospira* (gen. n.), *Proserella* (subgen. n.), *Rhynchospira*, *Schuchertella*, *Spirifer*, *Stropheodonta*, *Whitfieldella*; Grabau, 27.

Australia (Victoria), occ. *Lingula perovata*, *L. lewisii* var. n. *flemingtonensis*; Chapman, 5.

Devonian.

Germany (Daaden), sp. n. *Orthis*; Fuchs, 22.

Belgium (Winenne), sp. n. *Discinisca*; Maillieux, 35.

Italy (Monumenz), spp. n. *Orthis*, *Scenidium*, *Strophomena*, *Productella*, *Atrypa*, *Spirifer*, *Meristina*, *Pentamerus*, *Rhynchonella*; Gortani, 26

United States (Wisconsin), spp. n. *Glossina*, *Lingula*, *Liorhynchus*, *Camarotoechia*, *Atrypa*, *Orbiculoidea*, *Strophodontia*, *Pentamerella*; **Cleland, 7a.**

United States (Missouri), occ. *Syringothyris occidentalis* in Middle Devonian; **Schuchert, 50.**

United States (Virginia), occ. *Tropidoleptus carinatus* in Chemung fauna; **Kindle, 33.**

Chitral, Persia, Afghanistan and Himalayas; var. n. *Spirifer*; **Reed, 46.**

Japan, occ. *Spirifer verneuili*; **Yabe, 65.**

Carboniferous.

England, spp. n. *Meekella*, *Orthotetes*, *Derbyia*, *Schellwienella* (gen. n.); **Thomas, 56.**

Wales (Glamorgan), sp. n. *Spirifer*; **Dixon & Vaughan, 14.**

Scotland (Solway), occ. *Productus hemisphericus*; **Smith, 52.**

Germany (Hagen i. W.); **Nebe, 42.**

Bohemia, Bellerophonkalkes; **Diener, 13.**

Spitzbergen, *Productus isachseni* sp. n.; **Holstedahl, 30.**

United States (Illinois and Missouri), spp. n. *Camarophoria*, *Camarotoechia*, *Rhynchopora*; **Weller, 62.**

United States (Ohio), Maxville Limestone spp. described and figured; **Morse, 40.**

United States (Missouri), sp. n. *Dielasmoides* (gen. n.); **Weller, 63.**

United States (Arkansas, Moorefield Shale), spp. n. *Lingula*, *Liorhynchus*, *Productus*, *Rhipidomella*, *Spirifer*; **Girty, 24.**

Magdalen Is., spp. n. *Hemiptychina*, *Lingula*, *Orbiculoidea*, *Productus*, *Pugnax*, *Strophalosia*; **Beede, 2.**

Permian.

Oberes Palaeozoicum von Djulfa, *Brachiopoda*; **Stoganow, 54.**

Trias.

Spain (Aragonien), sp. n. *Lingula*; **Wurm, 64.**

Italy (Valseca), spp. n. *Waldheimia*; **Tommasi, 57.**

Jurassic.

France (Jura), spp. n. *Rhynchonella*, *Terebratula*, *Zeilleria*; **Rollier, 49.**

Italy (Acquasparta), spp. n. *Spiriferina*, *Rhynchonella*; **Principi, 44.**

Italy (Belluno), spp. n. *Waldheimia*; **De Toni, 12.**

Switzerland (Aarau), sp. n. *Zeilleria*; **Rollier, 49.**

Austria-Hungary (Stramberg-in-Mähren), lists, sp. n. *Rhynchonella*; **Blaschke, 3.**

Hungary (Kronstadt), var. n. *Terebratula*; **Toula, 58.**

Russia (Litauer), sp. n. *Waldheimia*; **Boden, 4.**

Brachiopoda der Inseln Preobraženje und Begičev (Russ.); **Sokolov, 53.**

Donez-Jura, spp. n. *Terebratula*, *Rhynchonella*; **Nalivkin, 41.**

British Columbia, sp. n. *Terebratula*; **Clapp & Shimer, 7.**

Switzerland, spp. n. *Rhynchonella*; **Hahn, 28.**

Cretaceous.

Deutsch Ostafrika, sp. n. *Terebratula*; **Krenkel, 34.**

Bohemia, cenomanian lists and figures; **Frič, 21.**

Hungary (Kronstadt), occ. *Rhynchonella Multicarinata* and *Terebratula peregrina* in Chalk; **Toula, 59.**

Denmark (Faxø), spp. n. *Crania*, *Terebratula*, *Argiope*, *Thecidium*; **Nielsen, 43.**

Tertiary.

Japan (Koshiba), spp. n. *Terebratulina*; **Yokoyama, 67.**

Japan (Miike Coal-field), sp. n. *Terebratula miikensis*; **Yokoyama, 66.**

United States (Alabama), Eocene sp. n. *Argyrotheca*; **Aldrich, 1.**

Miocän Sardinia; *Rhynchonella* sp. n.; **Dreger, 15.**

III.—SYSTEMATIC INDEX.

Monograph of British Carboniferous *Orthotetinae*, THOMAS Mem. Geol. Surv. U.K. 1 pt. 2 1910 pp. 83-134 pl. xiii 4to.

Middle Devonian Fossils of Wisconsin, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21 1911 pp. 1-222 pl. i-liii.

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†*Acrothele praestans* p. 55, *vertex* p. 56, *spp. n.*, Spiti Cambrian, REED Pal. Ind. 7 1 1910.

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Argyrotheca bermudana *sp. n.* Bermuda, DALL Nautilus 25 p. 86.

†*Argyrotheca dalli* *sp. n.* Alabama Eocene, ALDRICH Bull. Amer. Paleont. No. 22 1911 p. 13.

†*Atrypa flabellata* var. *n. prunulum* p. 159, *julii* *sp. n.* p. 159, *desquamata* varr. *n. forojuliensis*, *trigona*, p. 161, *signifera* var. *n. carnica* p. 163, Italy (Monumenz) Devonian, GORTANI Pal. Ital. 17 1911.—†*A. reticularis* var. *n. newsomensis* United States Silurian, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 93.—†*A. sinuata* *sp. n.* Wisconsin Devonian, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 75.

†*Billingsella cobboldi* *sp. n.* England Cambrian, MATLEY Q. J. Geol. Soc. 67 p. 305.

†*Camarophoria hamburgensis* *sp. n.* Illinois Mississippian, WELLER Bull. Geol. Soc. Amer. 21 p. 500.

†*Camarotoechia chouteauensis* *sp. n.* Missouri Mississippian, WELLER Bull. Geol. Soc. Amer. 21 p. 510.—†*C. purduei* varr. *n. agrestis* p. 60, *laxa* p. 61, Arkansas Mississippian, GIRTY U. S. Geol. Surv. Bull. No. 439.—

†*C. scitulus* *sp. n.* Wisconsin Devonian, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 71.

†*Catazyga uphami* var. *n. australis* United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 16 p. 31.

†*Chonetes granulifer* var. *n. armatus*, *mesolobus* var. *n. decipiens*, p. 127, *mesolobus* var. *n. euampygus* p. 129, Oklahoma Carboniferous, GIRTY New York N.Y. Ann. Acad. Sci. 21.—†*C. schucherti* *sp. n.* Wisconsin Devonian, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 91.

†*Chonostrophia lindenensis* *sp. n.* United States Silurian, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 81.

†*Cliftonia* *subgen. n.* of *Triplecia*, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 84.

†*Clitambonites diversus* var. *n. rogersensis* United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 323.

†*Crania faxensis* *sp. n.* Denmark Cretaceous, NIELSEN Medd. Geol. 17 p. 606.—†*C. granulosa* var. *n. cumberlandensis* United States Ordovician FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 16 p. 41.

†*Cyclocoelia crassiplicata* *sp. n.* United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 16 p. 36.

†*Dalmanella bassleri* p. 215, *breviculus*, *fairmountensis*, p. 216, *spp. n.*, United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14.

†*Derbyia hindi* p. 118, *gigantea* p. 120, *spp. n.*, England Carboniferous, THOMAS Mem. Geol. Surv. U. K. 1 1910 p. 120.

†*Dielasmella* *gen. n.*, genotype *Dielasma compressa* (Weller), Mississippian, WELLER J. Geol. 19 p. 446.

†*Dielasmoides* *gen. n.* p. 443, genotype *D. bisinuata* *sp. n.* Missouri Mississippian p. 444, WELLER J. Geol. 19.

†*Dinorthis ulrichi* *sp. n. carleyi* var. *n. insolens* United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 320.

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†*Girtyella* gen. n., genotype *Harttina indianensis*, Mississippian, WELLER J. Geol. 19 p. 442.

†*Glossina truncata* sp. n. Wisconsin Devonian, CLELAND Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 68.

†*Gypidula simplex* sp. n. United States Silurian, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 70.

†*Hamburgia* gen. n., genotype *H. lypa* sp. n. Illinois, Mississippian, WELLER J. Geol. 19 p. 446.

†*Hebertella alveata* nom. n. United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 224.—†*H. maria* var. n. *parkensis* United States Ordovician, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14 p. 319.—†*H. (Schizonema) fissistriata* p. 76, *celsa* p. 80, spp. n., United States Silurian, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14.—†*H. vulgaris* sp. n. New York Ordovician, RAYMOND Pittsburgh Ann. Carnegie Mus. 7 p. 242.

†*Hemiptychina?* *waageni* sp. n. Magdalen Is. Carbonic, BEEDE N. Y. St. Mus. Bull. No. 149 p. 178.

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†*Homoeospira schucherti* var. n. *elongata* p. 89, *pisum* sp. n. p. 90, United States Silurian, FOERSTE Granville Ohio Bull. Sci. Lab. Denison Univ. 14.

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VII (b) BRYOZOA

CONTENTS.

	PAGE
I. TITLES	13
II. SUBJECT INDEX.. .. .	14
General = 2003	14
Structure = 2007	14
Physiology = 2011 (vacant)	
Development = 2015	14
Ethology = 2019	15
Variation and Aetiology = 2023	15
Distribution = 2027 :—	
(a) Recent :—	
(α) Marine	15
(β) Non-Marine	15
(b) Fossil	15
III. SYSTEMATIC INDEX = 2031	16

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GENERAL. 2003

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Bryozoa für 1909. [Jahresbericht]; Lucas, 26.

Expeditions.

H.M.C.S. “Miner” in Tasman Sea; Maplestone, 28.

“Jacques-Cartier” expedition in 1908; Guérin-Ganivet, 19.

“Princesse-Alice” collections; Calvet, 12.

STRUCTURE. 2007

Bau der Individuen und Kolonien von *Plumatella repens*; Braem, 7.

Flustra carbasea, etc., enigmatic body in; Palk, 31.

DEVELOPMENT. 2015

Membranipora larva; Die *Cyphonautes* der nordischen Meere; Lohmann, 25.

Fortpflanzungsweisen von *Plumatella repens* und *Victorella continentalis*; Braem, 7

Larvae of *Bugula* and *Cephalodiscus* compared; **Braem, 8.**

Vegetative reproduction in *Bryozoa*; **Korschelt & Heider, 23.**

ETHOLOGY. 2019

Die *Cyphonantes* der nordischen Meere; *C. barroisi* sp. n.; **Lohmann, 25.**

Kolonienbildung bei *Plumatella repens*; **Braem, 7.**

Loxosoma sp. on *Xanthias haswelli* from Christmas Island; **Calman, 10.**

Parasites von *Plumatella repens*; **Braem, 7.**

Symbiose von *Plumatella repens* mit *Paludina*; **Braem, 7.**

Ueberwinterung von *Plumatella repens*; **Braem, 7.**

VARIATION AND AETIOLOGY.

2023

Die Variation bei den Statoblasten von *Pectinatella magnifica*; **Braem, 6.**

Pterobranchier und Bryozoen; **Braem, 8.**

DISTRIBUTION. 2027

(a) RECENT.

(a) Marine.

Greenland, sp. n. *Loxosomella* (gen. n.); **Mortensen, 29.**

Scotland, *Barentsia benedeni*; **Ritchie, 33.**

Ireland, *Brettia pellucida* var. n. *gracilis*; **Nichols, 30.**

N.E. Spain, spp. n. *Idmonea*, *Amathia*; **Calvet, 11.**

Azores, spp. n. *Crisia*, *Reptotubigera*, *Entalophora*, *Hornera*, *Concavea* (gen. n.); **Calvet, 12.**

Arctic (Europe), *Retepora elongata* var. n. *watersi*; **Guérin-Ganivet, 19.**

Tasman Sea, sp. n. *Selenaria*; **Maplestone, 28.**

(β) Non-Marine.

England (Norfolk); **Brydone, 9.**

Germany (Tegeler See), occ. *Pectinatella magnifica*; **Köhler, 22.**

Turkestan (Issyk Kul See), sp. n. *Victorella*; **Braem, 7.**

British India, var. n. *Hislopia*; **Annandale, 1.**

(b) FOSSIL.

Palaeozoic.

United States (Wisconsin); **Teller, 34.**

Cambrian.

Russia (Esthonia), sp. n. *Heteronema*; **Bassler, 5.**

Ordovician.

Russia (Baltic), sp. n. *Corynotrypa* (gen. n.); **Bassler, 3.**

Baltic Provinces, 66 spp. n., 2 gen. n.; **Bassler, 5.**

United States (Minnesota), sp. n. *Homotrypella*, var. n. *Ceramoporella*; **Bassler, 15.**

United States and Canada, spp. n. *Corynotrypa* (gen. n.); **Bassler, 4.**

Devonian.

Italy (Monumenz), spp. n. *Fenestella*; **Gortani, 18.**

Canada (Ontario), sp. n. *Corynotrypa* (gen. n.); **Bassler, 3.**

United States (Wisconsin), spp. n. *Heteronema*, *Vinella*, *Orbignyella*; **Bassler, 4.**

Carboniferous.

Arkansas, Moorefield Shale, sp. n. *Batostomella*; **Girty, 17.**

Trias.

Hungary (Bakony), spp. n. *Ceripora*, *Fascicularia*; **Vinassa de Regny, 35**; spp. n. *Ceripora*, *Stomatopora*; **Papp, 32.**

Cretaceous.

England (Chalk), sp. n. *Pavonulites*, nom. n. *Lunulites*; **Brydone, 9.**

France (Royan), List Chalk spp.; **Canu, 15.**

Bohemia, cenomanian lists and figures; **Frič, 16.**

Argentine, Rocanéan de Roca, 61 spp. n. 3 genn. n.; **Canu, 13.**

Tertiary.

Italy (Vicentin); **Kranz, 24.**

Australia (Victoria), spp. n. *Catenicella*, *Strophipora*, *Claviporella*, *Vittaticella*, *Brettia*, *Caberea*, *Farcimia*, *Menippea*, *Synaptacella* (gen. n.), *Cellularia*, *Membranipora*, *Steganoporella*, *Thalamoporella*, *Aspidostoma*, *Phylactella*, *Inversiula*; **Maplestone, 27.**

S.W. France, Burdigalian and Helvetian, spp. n. *Cellaria*, *Hippoporina*, *Lagenipora*, *Lunulites*, *Membranipora*, *Monopora*, *Onychocella*, *Schizoporella*; **Canu, 14.**

Antarctic (Cockburn Island), Pleistocene, sp. n. *Adeonella*; **Hennig, 20.**

III.—SYSTEMATIC INDEX.

Freshwater *Ctenostomata*, **ANNANDALE** Rec. Ind. Mus. **6** 1911 pp. 193–201 pl. xiii.

Freshwater Polyzoa of British India, **ANNANDALE** Fauna of Brit. Ind. London **1911** pp. 161–251 pls. iii–v.

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Cretaceous Bryozoa of Argentine, **CANU** An. Mus. Nac. Buenos Ayres **14** 194 pp. 215–292 pls. i–ix.

†*Actactoporella crassa* Ulrich, a var. of *Prasopora hospitalis* (Nicholson) Ulrich, and referred to *Homotrypella*, **BASSLER** U. S. Nation. Mus. Bull. **77** p. 194.

†*Actinopora incrassata*, *robertsoniana* p. 276, *complanata*, *striata*, p. 277, spp. n., Argentine Cretaceous, **CANU** An. Mus. Nac. Buenos Aires **14**.

†*Adeonella watersi* sp. n. Pleistocene de l'île Cockburn, **HENNIG** Schwed. Südpolar-Exped. **3** 10 p. 35.

Amathia pruvoti sp. n. N. E. Spain, **CALVET** Arch. Zool. **8** Notes et Res. p. lix.

†*Amphiblestrum harmeri* p. 243, *subpapillatum* p. 244, spp. n., Argentine Cretaceous, **CANU** An. Mus. Nac. Buenos Aires **14**.

†*Anaphragma mirabile* var. n. *cognata* Baltic Russia Ordovician, **BASSLER** U. S. Nation. Mus. Bull. **77** p. 299.

†*Anolotichia rhombica* (= *Dianulites rhombicus*, Dyb. nec *Chaetetes rhombicus* Nich.) Baltic Russia and Sweden p. 92, *brevipora* p. 94 f. 30, *revalensis* p. 95 pl. vi ff. 4–5 f. 31, *sacculus* p. 98 f. 34, spp. n., Baltic Russia Ordovician, **BASSLER** U. S. Nation. Mus. Bull. **77**.

Arthropodaria benedeni Foett. to Barentsia, **RITCHIE** Edinburgh Trans. R. Soc. **47** p. 846.

†*Aspidostoma onychocelliferum*, *globiferum*, spp. n., Argentine Cretaceous, **CANU** An. Mus. Nac. Buenos Aires **14** p. 254.—†*A. otwayensis* sp. n. Australia Tertiary, **MAPLESTONE** Proc. Roy. Soc. Victoria **23** p. 280.

†*Ballantiosoma fibrosum* p. 260, *parvulum* p. 261, spp. n., Argentine Cretaceous, **CANU** An. Mus. Nac. Buenos Aires **14**.

†*Batostoma nickwitzi* p. 276, *granulosum* p. 280, spp. n., Baltic Russia Ordovician, **BASSLER** U. S. Nation. Mus. Bull. **77**.

†*Batostomella dubia* sp. n. Arkansas Mississippian, **GIRTY** U. S. Geol. Surv. Bull. **439** p. 29.

†*Brettia brevis* sp. n. Australia Tertiary, **MAPLESTONE** Proc. Roy. Soc. Victoria **23** p. 271.

Brettia pellucida var. n. *gracilis* Ireland, **NICHOLS** Dublin Fish. Ireland Sci. Invest. **1** p. 7.

†*Caberea morningtoniensis* sp. n. Australia Tertiary, **MAPLESTONE** Proc. Roy. Soc. Victoria **23** p. 271.

Callopora foordii Nicholson to *Stigmatella*, **BASSLER** U. S. Nation. Mus. Bull. **77** p. 214.

†*Catenicella bairnsdalei*, *cuneiformis*, p. 266, *morningtoniensis*, *concinna*, *elegantissima*, p. 267, *minutissima*, *longispinosa*, p. 268, spp. n., Australia Tertiary, **MAPLESTONE** Proc. Roy. Soc. Victoria **23**.

†*Cellaria mutabilis* sp. n. France Miocene, **CANU** Bull. soc. géol. **9** 1909 p. 446 [figured but no description].

†*Cellularia balcomiensis*, *mooraboolensis*, spp. n., Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 275.

†*Ceramopora spongiosa* p. 77, *invenusta* p. 78, *intercellata* p. 79 spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Ceramoporella granulosa* var. n. minor Baltic Russia and Minnesota p. 81, *uxnormensis* sp. n. p. 82, Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Ceripora bockiana*, *spongicola*, p. 17, *flabellum*, *baconica*, p. 18, spp. n., Hungary Trias, VINASSA DE REGNY Res. wiss. Untersuchungen des Balaton Anhang 1 Bd. 1911.—†*C. pannonica* sp. n. Bakony Trias, PAPP Result. wiss. Unters. des Balaton Anhang 1 Bd. 1911 pp. 1-23.

†*Chilotrypa immatura* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 111.

†*Cienotremella* gen. n. *Lepralidae* type *gigantea* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 257.

†*Cladopora aedilis* Eichwald to *Eridotrypa* = (*Eridotrypa mutabilis*, Ulrich), BASSLER U. S. Nation. Mus. Bull. 77 p. 242.

†*Claviporella bicornis*, *airensis*, spp. n. Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 270.

†*Coeloclema crassimurale* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 84.

†*Coenites laciniatus* Eichwald to *Coeloclema*, BASSLER U. S. Nation. Mus. Bull. 77 p. 85.

†*Conocavea* gen. n. of *Cyclostomata* type *richardi* sp. n. Azores, CALVET Bul. Inst. Océan. Monaco 215 1911 p. 8.

†*Corynotrypa* gen. n. of *Tubuliporidae*, type *Stomatopora delicatula* p. 497, *barberi* United States and Baltic p. 509, *curta* Illinois p. 518, *medialis* Minnesota p. 519, *tennesseensis* Tennessee p. 524, *schucherti* Russia p. 525, *canadensis* Canada p. 526, spp. n. Ordovician, *nitida* sp. n. Ontario Devonian p. 512, *tenuichorda* nom. n. for *Stomatopora tenuichorda* Ulrich and Bassler p. 513, BASSLER Proc. U. S. Nation. Mus. 39.

(N-9186 p)

†*Cosciniium praenuntium* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 146.

†*Coscinopleura planulata* p. 248, *brydonei* p. 249, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

†*Crepipora schmidti* p. 87, *lunatifera* p. 88, *incrassata* p. 89, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Cribritina insignis* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 252.

Crisia grimaldii sp. n. Azores, CALVET Bul. Inst. Océan. Monaco 215 1911 p. 2.

Cyphonautes barroisi sp. n. Nordischen Meere, LOHMANN Nordisches Plankton 13 ix 1911 p. 38.

†*Dianulites bicornis* Eichwald to *Diplotrypa*, BASSLER U. S. Nation. Mus. Bull. 77 p. 317.—†*D. grandis* p. 237, *collifera* p. 239, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Diplotrypa moniliformis* p. 321, *hennigi* p. 322, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

Entalophora ganiveti sp. n. Azores, CALVET Bul. Inst. Océan. Monaco 215 1911 p. 5.

†*Eschara exserta* Eichwald to *Rhindictya*, BASSLER U. S. Nation. Mus. Bull. 77 p. 133.—†*E. flabellum* Leucht. to *Pachydictya*, BASSLER U. S. Nation. Mus. Bull. 77 p. 140.—†*E. gracilis* Eichwald to *Stictoporella*, BASSLER U. S. Nation. Mus. Bull. 77 p. 130.

†*Esthoniopora* gen. n. of *Batostomelidae* p. 259 type *communis* sp. n. Baltic Russia p. 260, *curvata* sp. n. Sweden p. 263, Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Euritina lata* p. 245, *elongata* p. 246, *intermedia* p. 247, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

†*Exochella mutabilis* p. 263, *elongata* p. 264, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

†*Farcimia airensis* sp. n. Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 272.

†*Fascicularia triasina* sp. n. Veszprém (Hungary) Trias, VINASSA DE REGNY Result. wiss. Unters. des Balaton Anhang 1 Bd. 1911 p. 16.

†*Favositella exserta* p. 102, *discoidalis* p. 103, ? *punctata* p. 105, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Fenestella crassesaeptata*, *julii*, spp. n. Italy Devonian, GORTANI Pal. Ital. Pisa 17 1911 p. 147.

†*Fistulipora primaeva* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 109.

†*Graptodictya bonnemai* p. 122, *obliqua* p. 126, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Gorgonia proavus* Eichwald to *Graptodictya*, BASSLER U. S. Nation. Mus. Bull. 77 p. 123.

†*Hallopora* nom. n. for *Callopora* Hall p. 325, *splendens* p. 329, *tolli* p. 333, *dybowskii* p. 335, *tenuispinosa* p. 338, spp. n., Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Halloporidae* nom. n. pro *Calloporidae* Hall, BASSLER U. S. Nation. Mus. Bull. 77 p. 324.

†*Helopora strigosa* Billings to *Glaucome*, BASSLER U. S. Nation. Mus. Bull. 77 p. 161.

†*Hemiphragma pygmaeum* p. 289, *batheri* p. 296, Sweden, *glabrum* p. 287, *multiporatum* p. 290, *subsphericum* p. 292, *rotundatum* p. 294, *maculatum* p. 295, Baltic Russia, spp. n., Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Heteronema monroei* sp. n. Wisconsin Devonian, BASSLER Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 51.—†*H. priscum* sp. n. Baltic Russia Cambrian, BASSLER U. S. Nation. Mus. Bull. 77 p. 57.

†*Hiantopora tripora* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 256.

†*Hippoporina elongata*, *saucatsensis*, p. 452, *parvula* p. 453, spp. n., France Miocene, CANU Bull. soc. géol. 9 1909.—†*H. normaniana*, *planulata*, p. 258, *deangelisi*, *gibbosa*, p. 259, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

Hislopia lacustris var. n. *moniliformis* India, ANNANDALE Fauna Brit. India 1911 p. 204.

†*Homotrypella cribrosa* sp. n. Baltic Russia and Minnesota Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 192.—†*H. subgracilis* Ulrich to *Bythopora*, BASSLER U. S. Nation. Mus. Bull. 77 p. 241.

†*Hoplocheilina* gen. n. type *Escharchosculifera* Reuss. p. 261, *spectabilis* sp. n. p. 262, Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

Hornera canui p. 6, *gravieri* p. 7, spp. n., Azores, CALVET Bul. Inst. Océan. Monaco 215 1911.

Idmonea arborea sp. n. N. E. Spain, CALVET Arch. Zool. 8 Notes et Rev. p. lviii.

†*Intricaria reticulata* Hall to *Chasmatopora*, BASSLER U. S. Nation. Mus. Bull. 77 p. 170.

†*Inversiula airensis* p. 281, *quadricornis* p. 282, spp. n., Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23.

†*Lagenipora minuscula* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 266.—†*L. d'arbignyana* sp. n. France Miocene, CANU Bull. soc. géol. 9 1909 p. 451.

†*Leptotrypa claviformis* Ulrich to *Stigmatella*, BASSLER U. S. Nation. Mus. Bull. 77 p. 217.

†*Lioclema vetustum* Baltic Russia p. 247, *spineum* Baltic Russia and Sweden p. 248, spp. n., Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Lioclemella clava* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 249.

†*Loxocalyx* gen. n. type *Loxosoma raja*, MORTENSEN Medd. Grønl. 45 1911 p. 405.

†*Loxosomella* gen. n. type *Loxosoma crassicauda*, *antedonis* sp. n. Greenland, MORTENSEN Medd. Grønl. 45 1911 p. 406.

†*Lunulites burdigalensis* sp. n. France Miocene, CANU Bull. soc. géol. 9 1909 p. 446.—†*L. marssoni* nom. n. (*Semiescharcha crassa* Biessel) England Cretaceous, BRYDENE Geol. Mag. 8 p. 155.

†*Membranipora arborea* p. 219, *lan-gana* p. 220, *abortiva* p. 221, *claudata*

p. 222, *capillimargo*, *watersiana*, p. 223, *okaiana* p. 224, *cummingsi* p. 225, *maplestoni* p. 227 *calveti* p. 228, *nordgardiana*, *minuscula*, p. 229, *trimorpha* p. 230, *impressata* p. 232, **spp. n.**, Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.—†*M. laevissima*, *ovifera*, **spp. n.**, Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 276.—†*M. reyti* **sp. n.** France Burdigalian, CANU Bull. Soc. géol. 9 1909 p. 443.

†*Membraniporella capitata* **sp. n.** Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 251.

†*Menipea uniserialis* **sp. n.** Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 272.

†*Mesotrypa discoidea* var. **n. orientalis** p. 196, *egena* p. 198, *expressa* p. 200, **spp. n.**, Baltic Russia, *milleporacea* **sp. n.** Baltic Russia and Sweden p. 201 f. 109, *milleporacea* var. **n. parva** p. 203 Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Micropora convexa* **sp. n.** Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 250.—†*M. cyclostomoides* Eichwald to *Pachydictya*, BASSLER U. S. Nation. Mus. Bull. 77 p. 141.

†*Mitoclema boreale* **sp. n.** Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 69.

†*Monopora gigantea* **sp. n.** France Helvetian, CANU Bull. Soc. géol. 9 1909 p. 457.

†*Monotrypa jewensis* **sp. n.** Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 310.

†*Monticulipora arborea* var. **n. bispinulata** p. 179, *dagoensis* **sp. n.** p. 181 f. 94, Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.—†*M. wesenbergiana* Dybowsky to *Hallopora*, BASSLER U. S. Nation. Mus. Bull. 77 p. 328.

†*Nematopora consueta* nom. **n.** for *N. delicatula* Ulrich, part, Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 155.

†*Nematotrypa* **gen. n.** of *Rhabdomesontidae* p. 164, type *gracilis* **sp. n.** p. 165, Baltic Russia and Sweden Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

†*Nicholsonella gibbosa* **sp. n.** (?=*Heteropora gibbosa* Eichw.) Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 224.

†*Ogivalia brevis* p. 239, *iheringsiana*, *henningsiana*, p. 240, *indistincta*, *galatea*, p. 241, **spp. n.**, Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

†*Onychocella transversa*, *elliptica*, **spp. n.**, France Burdigalian, CANU Bull. Soc. géol. 9 1909 p. 445.

†*Orbignyella germana* **sp. n.** p. 182, *expansa* var. **n. baltica** p. 183, Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.—†*O. tenera* **sp. n.** Wisconsin Devonian, BASSLER Wisconsin Geol. Nat. Hist. Surv. Bull. 21 p. 61.

†*Orbipora panderi* Dybowsky to *Hemiphragma*, BASSLER U. S. Nation. Mus. Bull. 77 p. 286.—†*O. solida* Baltic Russia p. 255, *acanthophora* p. 255, *indenta* Sweden p. 257, **spp. n.**, Ordovician, BASSLER U. S. Nation. Mus. Bull. 77.

Paludicella mülleri Kraepelin to *Victorella*, ANNANDALE Rec. Ind. Mus. Calcutta 6 1911 p. 196.

†*Pavonulites scandens* p. 153, *declivis* p. 154, *subquadrata* p. 155, **spp. n.** England Cretaceous, BRYDONE Geol. Mag. 8.

Pedicellina belgica a. syn. of *P. gracilis*, transf. to *Barentsia*, RITCHIE Edinburgh Trans. R. Soc. 47 p. 842.

†*Petalotrypa folium* **sp. n.** Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 266.

†*Phalangella romeroi* **sp. n.** Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 273.

†*Phylactella bairnsdalei* **sp. n.** Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23 p. 280.

†*Phyllodictya flabellaris* **sp. n.** Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 135.

†*Polypora furcata* Eichwald to *Chasmatopora*, BASSLER U. S. Nation. Mus. Bull. 77 p. 171.

†*Porella gregoryana*, *levinseni*, **spp. n.**, Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 265.

†*Proboscina striata* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 267.

†*Protocrisina ulrichi* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 73.

†*Philodictya subrecta* Ulrich to *Escharopora*, BASSLER U. S. Nation. Mus. Bull. 77 p. 116.

†*Pyriporella ameghinoi* p. 235, *filiozati* p. 237, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.

†*Reptocavea discoidea, explanata*, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 278.

†*Replotubigera compacta* p. 273, *spathulata, scalaris*, p. 274, spp. n., Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14.—*R. harmeri* sp. n. Azores, CALVET Bul. Inst. Océan. Monaco 215 1911 p. 4.

Retepora elongata var. n. *watersi*, GUÉRIN-GANIVET Bul. Inst. Océan. Monaco 207 1911 p. 21.

†*Rhamphonotus bassleri* sp. n. Argentine Cretaceous, CANU An. Mus. Nac. Buenos Aires 14 p. 237.

†*Rhombopora esthoniae* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 163.

†*Sceptropora francisca* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 154.

†*Schizoporella burdigalensis, minima* spp. n., France Miocene, CANU Bull. Soc. géol. 9 1909 p. 453.

Selenaria flagellifera sp. n. Tasman sea p. 118, and var. n. *minor* p. 119, MAPLESTONE Rec. Austr. Mus. 8.

†*Steganoporella dennanti* p. 276, *bairnsdalei, cliftonensis*, p. 277, *corioensis, elongata*, p. 278, spp. n., Australia Tertiary, MAPLESTONE Proc. Roy. Soc. Victoria 23.

†*Stellipora apsendesoides* sp. n. Baltic Russia Ordovician, BASSLER U. S. Nation. Mus. Bull. 77 p. 223.

†*Stigmatella massalis* p. 211, *inflecta* p. 212, spp. n., Baltic Russia Ordovician, BASSLER Washington D.C. U. S. Nation. Mus. Bull. 77.

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VIII. MOLLUSCA

ARRANGED BY

H. B. PRESTON.

CONTENTS

	PAGE
I. TITLES	5
II. SUBJECT INDEX:—	
General = 2203:—	
Biography	36
Bibliography	36
General Treatises	36
Museums, Collections, Expeditions	37
Nomenclature	37
Technique	38
Miscellanea.. .. .	38
Structure = 2207:—	
General	38
Nervous System	39
Sense Organs	39
Myology	39
Tegument	39
Shell	39
Vascular System	39
Alimentary System, Radula and Jaws	39
Respiratory Organs	39
Excretory Organs	39
Reproductive Organs	39
Physiology = 2211:—	
General	40
Alimentary System	40
Glandular Secretions, Pigments	40
Sense Organs	40
Nervous System	40
Environmental Effects	40

Development = 2215 :—

General	41
Oogenesis and Ovum	41
Spermatogenesis and Spermatozoon	41
Embryology	41
Post-Embryonic Ontogeny	41

Ethology = 2219 :—

General	41
Movements, Locomotion	42
Feeding Habits	42
Breeding Habits	42
Organogeny	42
Embryology	42
Luminosity	42
Habitat	42
Boring Habits	42
Acclimatisation, etc.	42
Hibernation and Æstivation	43
Parasitism, Commensalism, Parasites, etc.	43
Enemies, etc.	43
Economics	43

Variation and Ætiology = 2228 :—

General Treatises	44
Teratology, Phylogeny and Relationship	44

Distribution = 2227 :—

General	45
-----------------	----

(a) Recent :—

(a) Marine :—

Arctic Ocean	45
North Atlantic Ocean, Caribbean Sea and Gulf of Mexico	45
Mediterranean Sea, Black Sea	46
South Atlantic Ocean	46
Indian Ocean, Red Sea	47
Malaysia	47
Pacific Ocean	47
Antarctic Ocean	49

(β) Non-Marine :—

Sweden and Denmark = 2227 <i>da</i>	49
Russia = 2227 <i>db</i>	49
Southern Russia = 2227 <i>dbb</i>	49
Germany = 2227 <i>dc</i>	49
Belgium = 2227 <i>dd</i>	49
British Islands = 2227 <i>de</i>	50
France = 2227 <i>df</i>	50
Switzerland = 2227 <i>di</i>	51

(β) Non-Marine—*continued*:—

Austria-Hungary = 2227 <i>dk.</i>	51
Balkan Peninsula = 2227 <i>dl.</i>	51
Central Asiatic Russia = 2227 <i>duc.</i> ..	51
China, etc. = 2227 <i>eb.</i>	51
Japan, Formosa = 2227 <i>ec</i>	51
British India, etc. = 2227 <i>ef.</i>	51
Malaysia, Philippine Islands, etc. = 2227 <i>eg</i>	51
New Britain, Solomons, etc. = 2227 <i>ib</i> ..	52
Asiatic Turkey = 2227 <i>ei</i>	52
Africa = 2227 <i>f</i>	52
N. Africa = 2227 <i>fa</i>	52
Sahara, etc. = 2227 <i>fc</i>	52
W. Africa, Congo = 2227 <i>fd-e</i>	52
E. Africa, etc. = 2227 <i>ff</i>	52
S. Africa = 2227 <i>fg</i>	52
Madagascar = 2227 <i>fh</i>	52
Canada = 2227 <i>gb</i>	52
United States = 2227 <i>gt</i>	53
N.E. United States = 2227 <i>gg</i>	53
S.E. United States = 2227 <i>gh</i>	53
W. United States = 2227 <i>gi.</i>	53
Mexico = 2227 <i>gl</i>	53
C. America = 2227 <i>hb</i>	53
West Indies = 2227 <i>hc</i>	54
Ecuador = 2227 <i>he</i>	54
Peru = 2227 <i>hf</i>	54
Brazil = 2227 <i>hg</i>	54
Chili = 2227 <i>hk</i>	54
New Guinea, etc. = 2227 <i>ia.</i>	54
Atlantic Islands = 2227 <i>l</i>	54
Atlantic = 2227 <i>la</i>	54
Indian Ocean = 2227 <i>m</i>	54
Pacific = 2227 <i>n</i>	54

(b) Fossil:—

Cainozoic	54
Post-Tertiary	56
Tertiary	56
Mesozoic	58
Cretaceous	58
Jurassic	59
Triassic	60
Permian	60
Palæozoic	60
Carboniferous	60
Devonian	61
Silurian	61
Ordovician	61
Cambrian	61

III. SYSTEMATIC INDEX = 2231:--

Gastropoda	62
Amphineura	62
Prosobranchia	63
Opisthobranchia	77
Pteropoda	78
Pulmonata	78
Scaphopoda	86
Lamellibranchia	86
Cephalopoda	97

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II. SUBJECT INDEX.

ABBREVIATIONS employed in Sections II and III:—

descr. = described.
 exp. } = expedition,
 expdn. }
 occ. = occurrence.

GENERAL. 2203

Biography.

Boettger, Oscar; **S.**, 568 & Tomlin, 662.—List of works; [Boettger], 62.

Harford, W. G. W.; **D.**, 150.

Keep, Josiah; **Dall**, 162.

Watson, Rev. R. Boog; [Anon.], 15: **S.**, 569: Fischer, 205: and with list of works; Smith & Tomlin, 610.

Westerlund, Carl Agardh; **Hesse**, 311.

Bibliography.

Note on the "Hist. Nat. Gén. et Part. Coquilles," by P. L. Duclos; Sherborn & Smith, 586.

Collation of the "Illustrations Conchyliologiques" by J. C. Chenu; Sherborn & Smith, 586.

H. von Iherings „System und Verbreitung der Heliciden“; Boettger, 56.

Bibliography of *Lymnaeidae*; Baker, 19.

Classification of genus *Clausilia*; Caziot, 106.

British Nudibranchiata, bibliography; Eliot in Alder & Hancock, 199.

Solenogastres, bibliography of; Heath, 299.

Sycum pyrum, Solander; Laville, 399.

Notes on *Olividae*; Johnson, 349.

General Treatises.

I Molluschi; Bacci & Bernardi, 18.

The *Lymnaeidae* of North and Middle America recent and fossil; Baker, 19.

De danske Saltvansmuslinger; Christensen, 113.

Nacneregister samt Rettelser og Tilæg til „De danske Saltvandsmuslinger“; Christensen, 114.

Étude sur quelques espèces de *Pupidae* de la Section *Torquilla* et du groupe du *Pupa frumentum* de Draparnaud; Caziot, 104.

Étude de quelques *Pupa* (*philippii*, *savii*, *mühlfeldti*, *rhodia*, *obscura*, *ventilatoris*, *rupestris* and *dupoteti*) de la section des *Torquilla*; Caziot, 103.

Étude sur les *Helix* algériens et espagnols des groupes *Lactea* Müller et *Myristigma* Bourguignat; Caziot & Thieux, 108.

Monograph of the British Nudibranchiate Mollusca. Part viii; Eliot in Alder & Hancock, 199.

Land and Freshwater Mollusca of India, including South Arabia, Baluchistan, Afghanistan, Kashmir, Nepal, Burma, Pegu, Tenasserim, Malay Peninsular, Ceylon and other islands of the Indian Ocean. Pt. xi; Godwin-Austen, 254.

Die Unioniden. (Martini u. Chemnitz, Conchylien-cabinet); Haas, 284 & 285.

Systematisches Conchylien-Cabinet von Martini and Chemnitz, Terrestrial Operculata and *Ampullariidae*; Kobelt in Martini & Chemnitz, 421.

Systematisches Conchylien-Cabinet von Martini and Chemnitz, Naiades; Kobelt & Haas in Martini & Chemnitz, 422.

Systematisches Conchylien-Cabinet von Martini and Chemnitz, *Helicinidae*; Kobelt & Wagner in Martini & Chemnitz, 423.

Landmollusken. Ergänzungen und Berichtigungen zum 3. Bde. Nach des Verf. Tode fortgeführt v. Wilhelm Kobelt u. Gertrud Winter. [*Cochlostyla*]; Kobelt in Möllendorff, 443 & 444.

Iconographie der Land- und Süßwasser-Mollusken mit vorzüglicher Berücksichtigung der Europäischen noch nicht abgebildeten Arten; Kobelt in Rossmässler, 560.

Iconographie der Land- und Süßwasser-Mollusken mit vorzüglicher Berücksichtigung der Europäischen noch nicht abgebildeten Arten; Kobelt & Haas in Rossmässler, 561 & 562.

Iconographie der Land- und Süßwasser-Mollusken mit vorzüglicher Berücksichtigung der europäischen noch

nicht abgebildeten Arten. [Various genera]; **Rossmässler, 562.**

Notes on *Olividae*; **Johnson, 349.**

Mollusca für 1908. [Jahresbericht]; **Laackmann, Kobelt & Thiele, 390 & 391.**

Latirus, revision of genus with notes; **Melville, 434.**

Studien zur generellen Morphologie der Mollusken. Tl 1: Ueber Torsion und Asymmetrie der Gastropoden; **Naef, 453.**

Physa acuta in Ausbreitung begriffen; **Odhner, 469.**

Manual of conchology; structural and systematic. With illustrations of the species (Second series: Pulmonata). Vol. 21, Pts. 82 & 83; **Pilsbry, 514 & 515.**

Mollusca (Weichtiere). [Forts.] H. G. Bronn's Klassen u. Ordnungen des Tierreichs; **Simroth, 594 & 595.**

Die Verbreitung der Chitoniden im Lichte der Pendulationstheorie nebst verwandten Bemerkungen; **Simroth, 593.**

Monograph of Land and Freshwater Mollusca of British Isles, continued; **Taylor, 651.**

Museums, Collections, Expeditions.

Exhibition of Cainozoic freshwater and Lacustrine Mollusca from Germany in British Museum; [Anon.], 13.

Correspondence from Brazil; **Baker, 22.**

Note au sujet d'une collection de coquilles de l'île Maurice offerte par M. Carrié; **Bavay, 40.**

Notes on some cephalopods in the collection of the University of California; **Berry, 49.**

Observations sur les *Mathildia* de la collection de Folin; **Boury, 75.**

Geologische und paläontologische Resultate der Dr. Grotheschen Vorderasien expedition 1906-07; **Broili, 82.**

Rivers Collection of fossil Californian Mollusca, disposal of; **Buell, 88.**

On the various classifications adopted for the section *Campylaea* of the genus *Helix*; **Caziot, 105.**

Notes on certain fossils in institutions in the North of Spain; **Cisneros, 117.**

Summary of the shells of the genus *Conus* from the Pacific coast of America in the U. S. National Museum; **Dall, 156.**

Additions to the Museum of Harvard College, W. G. Binney collection, etc.; **Faxon, 203.**

Note préliminaire sur les Mollusques terrestres et fluviatiles recueillis par M. Gadeau de Kerville pendant son voyage en Syrie; **Germain, 240.**

Solothurn, list of local species in museum; **Geyer, 245.**

British Antarctic Exp. 1907-9, Mollusca; **Hedley, 303.**

A study in museum arrangement. (Illustrated by an exhibit explanatory of the form, structure, range in time, development, and life-history of Cephalopods fossil and recent); **Horwood, 326.**

Manchester Museum, notes on certain spp.; **Jackson, 346.**

Mission dans l'Antarctique dirigée par le Dr. Charcot (1908-1910). Collections recueillies par le Dr. J. Liouville. Gastropodes prosobranches et scaphopodes; **Lamy, 392.**

Mission dans l'Antarctique dirigée par le Dr. Charcot. Collections recueillies par le Dr. J. Liouville. Pélécy-podes; **Lamy, 393.**

Marine mollusca of Iceland in the collections of the Swedish State Museum; **Odhner, 468.**

Phylogenie des Lamellibranches. Résult. Explor. Siboga; **Pelseener, 499.**

Prosobranchia Rachiglossa of Siboga Expedition; **Schepman, 575.**

Mollusca of "Porcupine" Expedition; **Sykes, 648.**

Land and Freshwater Mollusca of the Seychelles Archipelago; **Sykes, 649.**

Mollusken der Deutschen Zentralafrika-Expedition; **Thiele, 655.**

Nomenclature.

Rafinesque's "Analyse de la Nature" 1815; **Iredale, 334.**

Technique.

Notes on collecting *Sphaerium* and *Pisidium*; Allen, 9.

Miscellanea.

Note on *Lymnaea florissantica*; Cockerell, 130.

Mineral condition of Calcium carbonate in Fossil shells; Cole & Little, 133.

Observations sur les Ostréidés. Origine et classification; Douvillé, 188.

Zoologisches Namen und Adressen der lebenden Zoologen, Anatomen, Physiologen und Zoopalaeontologen, sowie der künstlerischen und technischen Hilfskräfte; Friedländer & Sohn, 214.

Note on *Lampsilis discus* (Lea); Frierson, 217.

Notes on oriental *Unionidæ*; Frierson, 218.

Remarks on determination of genera and species; Godwin-Austen, 255.

Index to Vols. i-xii of the Journal of the Conchological Society (first instalment); Horsley, 325.

History of the marine fauna of Brazil and the neighbouring regions; Ihering, 333.

The Gastropod Apex in Classification; Iredale, 335.

Das Nilrätzel; Kobelt, 368.

Über Perlen und Perlenbildung bei *Margaritana*; Korschelt, 378.

Origin of Belamnitæ; L., 388.

Cymatium tritonis and *C. nodiferum* as musical instruments; [Mahillon], 411.

Classification of European Naiades; Ostmann, 476.

Collecting on the Sipsey River, Alabama; Smith, 611.

Genus *Vulsella*; Smith, 607.

Suggestions for the use of certain terms; Sterki, 636.

A prehistoric *Cypraea tigris* L. in Hants; Tomlin, 661.

Ein Perlenvorkommen in 1693; Vohland, 690.

Erklärung und tatsächliche Berichtigung; Weiss, 703.

Cypraea moneta in a prehistoric settlement; Wenz, 705.

Hexabranchus flammulatus Q. and G., notes on; Wild, 714.

STRUCTURE. 2207**General.**

Beiträge zur feineren Anatomie der *Phyllirhoë bucephala*; Born, 67.

Cirrothauma. Ein blinder Cephalopod; Chun, 116.

Rudistes, shell of; Douvillé, 187.

British Nudibranchiata; Eliot in Alder & Hancock, 199.

Certain new species of *Veronicella*, anatomy of; Germain, 236.

Hypobranchial gland of *Murex trunculus*; Grynfeldt, 270.

Anodonta, ciliary apparatus and mitosis of ciliated cells; Gutheil, 277.

Beiträge zur Anatomie der Gattung *Chilina*; Haeckel, 287.

Zur Kenntnis der Anatomie von *Monilearia phalerata* W. and B.; Hesse, 312.

Anatomy and Histology of Heteropods; Krasucki, 382.

The siphons of Ammonites and Belemnites; L., 388.

The marsupium of the *Unionidæ*; Lefevre & Curtis, 402.

Pisidium obtusale. anatomy of; Odhner, 467.

Comparison of anatomical structure of certain Naiades with that of certain N. American Forms; Ortman, 475.

The marsupium of the *Anodontinæ*; Ortman, 477.

The mechanism of locomotion in gastropods; Parker, 493.

Palial cavity in certain Opisthobranchs; Perrier & Fischer, 501.

Anatomische Untersuchung von *Megadenus* und *Turtonia* genn. n. nebst Anmerkungen betreffs anderer Formen; Rosén, 557.

Unionidæ, shell regeneration of; Rubbel, 566.

Über die Anatomie und die systematische Stellung von *Gadinia peruviana* Sowerby und *G. garnoti* Payraudau; **Schumann, 582.**

Über das System der Gastropoden; **Simroth, 597.**

Notes on the anatomy and physiology of the *Unionidae*; **Sterki, 639.**

Anatomie von *Proneomenia sluiteri* und *thulensis*; **Thiele, 654.**

Sur les globules polaires géants chez le mollusque *Philine aperta* L.; **Tur, 672.**

Über Japanische Cephalopoden; **Wülker, 725.**

Nervous System.

Psammobia vespertina, Nervous System of; **Bloomer, 54.**

Helicinidae, nervous system of; **Bourne, 73.**

Sense Organs.

Structure of retina of Prosobranchiata; **Szombathy, 650.**

Anatomy of large tentacle of *Helix pomatia*; **Yung, 727.**

Myology.

Psammobia vespertina, Pallial Muscles of; **Bloomer, 54.**

Psammobia vespertina, Pedal Muscles of; **Bloomer, 54.**

Helicinidae, Muscular System of; **Bourne, 73.**

Quergestreifte Muskulatur und vesiculöses Gewebe bei Gastropoden; **Merton, 437.**

Tegument.

Helicinidae, Mouth of; **Bourne, 73.**

Water pores of *Bullia digitalis*; **Lewis, 404.**

Shell.

On the layers of the Molluscan shell; **Horwood, 327.**

Ornament in British *Unionidae* useless as specific characters; **March, 415.**

Corbula gibba, spinous in youth; **Massy, 425.**

Formation of pearls in *Margaritana margaritifera*; **Rubbel, 565.**

Pisidium, cardinal teeth of; **Sterki 640.**

Vascular System.

Helicinidae, Circulatory system of; **Bourne, 73.**

Contribution à l'étude du sang chez les Invertébrés. Sucre libre et sucre combiné du sang de l'Escargot; **Morel et Bellion, 448.**

Alimentary System, Radula and Jaws.

Psammobia vespertina, *ferroensis*, *tellinella*, Alimentary Canal of; **Bloomer, 54.**

Helicinidae, alimentary system of; **Bourne, 73.**

Triton tessellatus, Reeve, radula of; **Peile, 498.**

Buccinum undatum, variation in radulae of; **Irving, 336.**

Ueber den Bau des Flimmerapparates; **Kolatschev, 371.**

Ueber den Enddarm der Limaciden; **Simroth, 598.**

Recherches sur la structure histologique du Tube digestif de l'*Helix pomatia* L.; **Spiro, 626.**

Respiratory Organs.

Helicinidae, Respiratory system of; **Bourne, 73.**

Le siphon des Ammonites et les Bélemnites; **Grandjean, 259.**

Excretory Organs.

Helicinidae, excretory organs of; **Bourne, 73.**

Bactéries des Invertébrés. ii: La glande à concrétion de *Cyclostoma elegans* Drap.; **Mercier, 436.**

Reproductive Organs.

Helicinidae, generative organs of; **Bourne, 73.**

Untersuchungen über die Zwitterdrüse der Pulmonaten. i. Die Differenzierung der Keimzellen bei *Helix arbustorum*; **Buresch, 95.**

Fagocitismo in Basalzellen di ghandola ermafroditica di *Helix pomatia*; Martiis, 420.

Berichtigung [betr. Spermatophoren v. *Eledone* u. *Octopus*]; Meyer, 438.

Die Spermatophore von *Polypus (Octopus) vulgaris*; Meyer, 439.

Une anomalie de l'appareil génital hermaphrodite de l'*Helix aspersa*; Quintaret, 541.

Abnormality in the hermaphrodite genital organ of *Helix aspersa*; Quintaret, 541.

Struktur und Bildung der Bruttaschen bei *Cyclas cornea* L.; Scherschewsky, 576.

PHYSIOLOGY. 2211

General.

Manganese of the lamellibranchs; Bradley, 79.

Échange gazeux des oeufs d'*Aplysia limacina*; Buglia, 89.

Les vacuolides de la purpurase et la théorie vacuolidienne; Dubois, 190.

British Nudibranchiata; Eliot in Alder & Hancock, 199.

Activité peroxydasique comparée du sang et des organes chez les Mollusques à sang hémocyannique (réaction à la phénoloxytaléine); Fleig, 206.

The nomatocysts of eolids; Glaser, 251.

Atrina rigida, organic functions; Grave, 260.

Helicigona aethiops M. Bielz; Hesse, 310.

Ueber Enzyme in der Auster (Holländisch); Heymann, 314.

Preliminary note on the ecology of the early juvenile life of the Unionidae; Isely, 337.

Physikalische und physiologische Faktoren bei der Anheftung von Schnecken der Brandungszone; Menke, 435.

Contribution à l'étude du sang chez les Invertébrés. Sucre libre et sucre combiné du sang de l'Escargot; Morel et Bellion, 448.

Les courbes d'évanouissement des traces mnémoniques; Piéron, 510.

Die Entstehung der Perlen bei *Margaritana margaritifera*; Rubbel, 564.

Notes on the anatomy and physiology of the Unionidae; Sterki, 639.

Über den Chromosomencyclus bei Pteropoden; Zarnik, 730.

Alimentary System.

Recherches sur les ferments protéolytiques des Invertébrés; Sellier, 584.

Glandular Secretions and Pigments.

Ein Beitrag zur Respurkunde, Bd. 4; Gewährung von Einblicken in die internationale Literatur der letztergangenen 4 Jahrhunderte über Purpur; Dedekind, 175.

Action sur la pression sanguine des extraits glandulaires de Mollusques; Gautrelet, 228.

Hypobranchial Gland of *Murex trunculus*; Grynfeltt, 270.

Ueber das Vorkommen des Betains bei Cephalopoden; Henze, 309.

Bactéries des Invertébrés. ii: La glande à concrétion de *Cyclostoma elegans* Drap.; Mercier, 436.

Über die schwarze Cephalopodentinte; Paladino, 486.

Sense Organs.

Experimentelle Studien an den Eiern von *Macra*; Kostanecki, 380.

Helix pomatia, insensibility of to light; Yung, 728.

Nervous System.

Action of heat and cold on the motive activity and sensibility of certain mollusca; Matisse, 426.

Contributi alla fisiologia del movimento e del sistema nervoso degli animali inferiori. (iii.) [Heteropoda, Pteropoda]; Polimanti, 532.

Environmental Effects.

Relation between variation in form and environment; March, 415.

Die Akkommodation der Cephalopoden und Fische; Pflügk, 508.

DEVELOPMENT. 2215

General.

A note on the metamorphosis of the mussel *Lampsilis laevissimus*; Coker & Surber, 131.

Fortpflanzung der Miesmuschel; Delsman, 178.

British Nudibranchiata; Eliot in Alder & Hancock, 199.

Anatomy and physiology of the wing-shell, *Atrina rigida*; Grave, 260.

Die Entstehung der Perlen bei *Margaritana margaritifera*; Rubbel, 564.

Zur Kenntnis der Schalenregeneration bei den Gastropoden; Techow, 652.

Expériences sur l'action du radium sur le développement de *Pholas candida* Lam.; Tur, 673.

Recherches sur l'influence des rayons du Radium sur le développement du mollusque *Pholas candida*; Tur, 671.

Oogenesis and Ovum.

Oogenese bei *Dentalium entale* und *Vermetus triquetrus* (Russ.); Bogojavlenskij, 63.

Untersuchungen über die Zwitterdrüse der Pulmonaten. i. Die Differenzierung der Keimzellen bei *Helix arbustorum*; Buresch, 95.

Sur la ponte et le développement du Vignot (*Littorina littorea*); Caullery et Pelseener, 102.

Neptunea satura, Mart., eggs of; Dautzenberg & Fischer, 170.

Loligo pealii (Les.), Copulation, egg-laying and fertilization; Drew, 189.

Über parthenogenetische Entwicklung der Eier von *Mactra* mit vorausgegangener oder unterbliebener Ausstossung der Richtungskörper; Kostanecki, 381.

Egg-laying and segmentation of certain gastropods; Pelseener, 500.

Der Bau der Eier bei den Mollusken; Retzius, 548.

Degeneration of egg-cells of Gastropods; Soos, 619 & 620.

Limnaea stagnalis Lin.; Vignal, 686.

Über den Chromosomencyclus bei Pteropoden; Zarnik, 730.

Spermatogenesis and Spermatozoon.

Zur Spermatogenese von *Helix pomatia*; Demoll, 179.

Embryology.

Oreohelix, embryonic shells of; Daniels, 165.

Early stage of *Acmaea*; Morse, 449.

Researches on the Embryology of gastropods; Pelseener, 500.

Embryology of certain gastropods; Pelseener, 500.

Struktur und Bildung der Bruttaschen bei *Cyclas cornea* L.; Scherschewsky, 576.

Die Gastropoden des nordischen planktons; Simroth, 592.

The larva and spat of the Canadian oyster; Stafford, 628.

Sepia officinalis, fry of; Vayssiére, 681

Limnaea stagnalis Lin.; Vignal, 686.

Die Entwicklung der Kiemen bei *Cyclas cornea* und anderen Acephalen des süßen Wassers. (Ein Beitrag zur Organogenese und Phylogenie der Lamellibranchiaten); Wasserloos, 700.

Post-Embryonic Ontogeny.

Wachstum der Miessmuschel; Re-deke, 544 & 545.

Gastropodenlaiche und Gastropodenlarven der Deutschen Tiefsee-Expedition 1898-1899; Simroth, 596.

Planktonkunde; Steuer, 642.

ETHOLOGY. 2219

General.

Le cycle évolutif et les affinités systématiques de l'Haplosporidie des *Donax*; Cépède, 109.

Cirrothauma. Ein blinder Cephalopod; Chun, 116.

British Nudibranchiata; Eliot in Alder & Hancock, 199.

Limnaea pereger var. living without shell; Gynge, 281.

Protective resemblance in certain British Marine Mollusca; **Hargreaves**, 296.

Sounds emitted by a mollusc; **O.**, 465.

Shells dispersed by insects; **Stally**, 629.

Civilization and Snails; **Sterki**, 637.

Unio margaritifera in confinement; **West**, 709.

Movements, Locomotion.

Locomotion in *Lymnaea*; **Baker**, 19.

Ciliary movement of adult mollusca; **Bohn**, 65.

Untersuchungen über die Schwimmbewegungen und die Statocysten der Gattung *Pecten*; **Buddenbrock**, 87.

Modiolaria marmorata method of progression; **Colton**, 138.

Boring habits of *Pholas*; **Hutton**, 332.

Locomotive disc of *Stylommato-phora*; **Sterki**, 635.

Feeding Habits.

Food of Solenogastres; **Heath**, 299.

Crepidula, feeding habits of; **Orton**, 479.

Breeding Habits.

Pholas crispata, breeding habits of; **Brown**, 83.

Loligo pealii (Les.). Copulation, egg-laying and fertilization; **Drew**, 189.

Mytilus edulis, reproduction of; **Field**, 204.

Reproduction in the *Unionidae*; **Lefevre & Curtis**, 401.

Crepidula fornicata, breeding habits of; **Murie**, 451.

Littorina and other gastropods copulation of; **Pelseneer**, 500.

Dart of *Helix undata*, Lowe, note on; **Spence**, 625.

Spawning of certain Nudibranchs; **Storror**, 646.

Ueber die Entwicklung der Spermen bei *Conus mediterraneus* Brug.

und *Vermetus gigas* Biv.; **Kuschakewitsch**, 385.

Unio pictorum, discharge of spermatozoa of; **Latter**, 398.

Berichtigung [betr. Spermatophoren v. *Eledone* u. *Octopus*]; **Meyer**, 438.

Die Spermatophore von *Polypus* (*Octopus*) *vulgaris*; **Meyer**, 439.

Organogeny.

Organogeny of certain Gastropods; **Pelseneer**, 500.

Embryology.

Spawning and development of *Littorina littorea*; **Caullery & Pelseneer**, 102.

Limnaea stagnalis Lin.; **Vignal**, 686.

Luminosity.

Nouvelles recherches sur la lumière physiologique chez *Pholas dactylus*; **Dubois**, 191.

Habitat.

Ostrea cochlear, etc., habitats of; **de Boury**, 77.

Epiphragmophora infumata, Gld.; **Button**, 97.

Comparison of *Unionidae* of Pearl River, Missouri and Sabine River, Texas; **Frierson**, 215.

Cave mollusca; **Germain**, 235.

Epiphragmophora fidelis; **Gifford**, 246.

Zur Kenntnis der Molluskenfauna an Orten die gleichzeitig Standorte sogenannter Relikten-Pflanzen sind; **Hilbert**, 316.

Die natürlichen Verhältnisse in den Gegenden der Zuiderzee, wo Miesmuschel und Auster vorkommen; **Hoek**, 320.

Certain West Indian land mollusca, habitats of; **Webb**, 701.

Boring Habits.

Pholas crispata, boring habits; **Brown**, 83.

Acclimatisation, etc.

Artificial colonisation of *Mytilus edulis*; **Bjerkan**, 50 & 51

Germany, introduction certain spp.; Boettger, 61.

Lithoglyphus naticoides in the canals of N.E. France; Cardot, 101.

Lymnaea auricularia in Ohio; Goodrich, 257.

Achatina fulica, acclimatization of; Green, 261 & 263.

Asiatic Viviparas in California; Hannibal, 295.

Crepidula fornicata, introduction of into Great Britain; Murie, 451.

Note sur l'acclimatation d'une Clausilie syrienne aux environs d'Alger; Pallary, 488.

Dissemination of *Petricola pholadiiformis* Lam.; Pfeffer, 507.

Cork District, acclimatization of *Helix cantiana*; Phillips, 509.

Denmark, *Petricola pholadiiformis*, occ. of; Schlesch, 579.

Hochgradige Vermehrung akklimatisierter Schnecken; Soós, 621.

Hillsborough, Ireland, acclimatization of *Hyalinia rogersi*; Stelfox, 633.

Means of migration of certain mollusca; Zograf, 732.

Hibernation and Aestivation.

Aestivation in *Lymnaeidae*; Baker, 19.

Helix pomatia, hibernation of; Spence, 624.

Parasitism, Commensalism, Parasites, etc.

Parasites of *Lymnaeidae*; Baker, 19.

L'appareil néphridien de deux cercaires parasites de *Donax vittatus* Da Costa; Dollfus, 185.

Mytilus edulis, parasites of; Field, 204.

A new genus of parasitic gastropods; Heath, 298.

Parasitism in the *Unionidae*; Lefevre & Curtis, 400 & 401.

Bactéries des Invertébrés. II: La glande à concrétion de *Cyclostoma elegans* Drap; Mercier, 436.

Parasitische Schnecken; Rosén, 557.

Ueber mutmasslichen Raumparasitismus einer Ophiure in einer Schnecke; Simroth, 600.

Enemies, etc.

Enemies of *Lymnaeidae*; Baker, 19.

Enemies of the oyster; Deyrolle-Guillon, 181 & Murie, 451.

Mytilus edulis, enemies of; Field, 204.

Economics.

Nine hundred and twelve Pearls in one *Unio*; [Anon.], 14.

Report on shell fish other than oysters in relation to disease; Bulstrode, 91.

Ostrea, inverdimento; Calvet, 99 & 100.

Salad plants contaminated by *Arion rufus*; Caziot, 107.

The food value of sea mussels; Field, 204.

Seemuschelkalk; Friedel, 213.

A few notes on oyster culture in Louisiana; Gates, 223.

The Rubber Slug (*Mariaella dussumieri*, Gray); Green, 262.

Pearl Fishery of Bantayan (Philippine Islds.); Griffin, 268.

Notes sur les gisements de Mollusques comestibles des côtes de France. Les Anses de la Côte occidentale du Finistère et l'Archipel de Sein; Guérin-Ganivet, 274, 275 & 276.

Zur Frage der Perlbildung in unseren Süßwassermuscheln; Hein, 305.

Muschelfischerei und Muschelzucht in der nördlichen Zuiderzee; Hoek, 321.

Present depletion of the Oyster-bed of Sind, its causes and the remedies; Hornell, 324.

Gisements de coquilles comestibles, du Presqu'île du Cotentin; Joubin, 354.

Ostriche di Napoli e tifo; Mazzarelli, 431.

Holy Island, Mussel culture; Meek, 432.

Volumetric studies of the food and feeding of oysters; Moore, 447.

Condition and extent of Oyster Beds of James River, Virginia; Moore, 446.

Crepidula fornicata, influence of on oyster-beds; Murie, 451.

The Oyster, enemies of; Murie, 451.

The possibility of combatting the noxious animals in the fishery, especially the snails of the Limfjord. (Danish); Petersen, 503.

Wie aus Würmern Perlen werden; Pintner, 531.

Formation of pearls in *Margaritana margaritifera*; Rubbel, 565.

The fishery resources of the Philippine islands. Part 3, Pearls and pearl fisheries; Seale, 583.

VARIATION AND ÆTIOLOGY.

2223

General Treatises.

Siphonaria algesirae, Quoy, modification of shell of, due to locality; Cooke, 139.

A study of the vital conditions determining the distribution and evolution of snails in Tahiti; Crampton, 148.

British *Nudibranchiata* variation of; Eliot in Alder & Hancock, 199.

Beiträge zur Molluskenfauna von Magdeburg. Nebst variationsstatistischen Untersuchungen über einige Arten; Honigmann, 322.

Fortgesetzte Vererbungsstudien. [Albinismus bei Schnecken. Hautfarbe der Mulatten. Falsche Bastarde v. *Tachea*-Arten]; Lang, 397.

Die grösste Muschel Norwegens; Wollébæk, 719.

Teratology, Phylogeny and Relationship.

Variation and abnormalities among *Lymnaeidae*; Baker, 19.

Mediterranean, scalariform, sinistral, carinate and other monstrous forms of *Conus mediterraneus* Hwass, *Marginea clandestina* Brocchi, *Amycla corniculum* Olivi, *Columbella rustica* Lin., (*Mitrella*) *scripta* Lin., *Murex trunculus* Lin. and *Aporrhais pespellicani* Lin.; Dautzenberg, 168.

Helix (*Caracollus*), (*Camaena*), *Achatina*, various monstrous forms of; Dautzenberg, 169.

Upper Congo, *Achatina schweinfurthi*, variation of; Dupius, 193.

British *Nudibranchiata*, affinities and relationships of; Eliot in Alder & Hancock, 199.

Rapport entre les cloisons d'*Oppelia subradiata* Sow. et celles de quelques *Oxynticeria* liasiques; Favre, 202.

Helix aspersa m. *sinistrorsum*, occ. of; Gygell, 279.

Solenogastres, phylogeny of; Heath, 299.

Buccinum undatum, variation in radulae of; Irving, 336.

Clausilia bidentata with a double aperture; Jackson, 342.

Relationship and phylogeny amongst British *Uniones*; March, 415.

Variation in certain Upper Tertiary (Isd. of Cos), spp.; Newton, 461.

Phylogeny of certain gastropods; Pelseneer, 500.

Anpassung an ungünstige Verhältnisse; Pfeffer, 505.

Une anomalie de l'appareil génital hermaphrodite de l'*Helix aspersa*; Quintaret, 541.

Ueber einen eigentümlichen Schalen-defekt eines *Thaumastus*; Simroth, 599.

Conus beckeri sp. n. with abnormal spire; Sowerby, 623.

Tritonia hombergii, white var. of; Storow, 646.

Cypraea neglecta Sow. monstr. Rouxi; Vayssière, 683.

Nassa reticulata, monstrous specimen of; Vayssière, 682.

Limnaea stagnalis Lin.; Vignal, 686.

Polygyra albolabris in Michigan, variation; Walker, 696.

Variations in *Urosalpinx*; Walter, 697.

Thais (*Purpura*) variation of; Williamson, 715.

M. Cossmann on the phylogeny of *Cerithium*; Wood, 721.

Phylogeny of certain *Cerithiidae*; Wood, 722.

Malformations of large tentacle of *Helix pomatia*; Yung, 727.

DISTRIBUTION. 2227

(a) RECENT.

General.

Durban, notes on certain spp.;
Adams, 2.

Bombay, notes on certain spp.;
Adams, 2.

La Plata, notes on certain spp.;
Adams, 2.

Clare Island, faunal list (Marine);
Colgan, 134.

Faunal list of Bermuda Mollusca;
Dall & Bartsch, 164.

California, San Mateo Point, faunal
list; Edson, 195.

Occ. certain spp. as evidence of a
former Atlantidean Continent; Ger-
main, 241.

Atlas of Zoogeography; Bartholo-
mew, Clarke & Grimshaw, 25.

Denmark, faunal list; Klöcker, 366.

Zur Kenntnis der Molluskenfauna
an Orten, die gleichzeitig Standorte
sogenannter Relikten-Pflanzen sind;
Hilbert, 316.

California (nr. San Pedro), faunal
list; Oldroyd, 474.

Les Lamellibranches de l'expédition
du Siboga. Partie anatomique;
Pelseneer, 499.

Gastropoden und Pelecypoden Russ-
lands; Sagovskij, 570.

Bay of Cadiz Region, faunal list
concluded; Smith, 615.

Beiträge zur Fauna und Flora des
Quartärs in Mecklenburg; Steusloff,
643.

Cornwall (St. Ives Bay), faunal lists;
Vallentin, 677.

Bermuda shells; Vanatta, 678.

Helicinidae, geographical distribution
of; Bourne, 73.

Eastbourne district occ. certain spp.;
Adkins London Proc. S. Lond. Ent.
Nat. Hist. Soc. 1899 pp. 50-51.

Hastings, occ. certain species; Bloom-
field Hastings and E. Sussex Nat. 1
p. 306.

Lincolnshire, occ. certain spp.;
Naturalist London 1911 pp. 56-57.

North Antrim, occ. certain spp.;
O'Connor Irish Nat. Dublin 20 p. 39.

Scarborough District, occ. certain
spp.; Naturalist London 1911 p. 108.

Scarborough, faunal list; Woods
Naturalist London 1911 pp. 412-422.

Yorkshire, occ. certain spp.;
Naturalist London 1911 pp. 235-236
& 325.

(a) Marine.

Arctic Ocean.

Arctic Seas (Nova Zembla, Barents
Sea, White Sea, Arctic Ocean), occ.
certain spp.; Dautzenberg & Fischer,
171 & 172.

Nova Zembla, *Natica*, sp. n.; Daut-
zenberg & Fischer, 171 & 172.

Arctic Seas, list of spp.; Dautzen-
berg & Fischer, 172.

Russia, Kola-Fjords, occ. certain
spp.; Derjugin, 180.

Pelecypoda der Inseln Begičev und
Preobraženje; Sokolov, 617.

North Atlantic Ocean, Caribbean
Sea and Gulf of Mexico.

Norway, occ. certain spp.; Dautzen-
berg & Fischer, 172.

Denmark, marine bivalves of; Chris-
tensen, 113.

Living and extinct *Mollusca* from
the Skagerak and the Rubjerg-Klint;
Christensen, 115.

Denmark, occ. certain spp.; Ussing,
675.

North Sea, occ. certain spp.; Daut-
zenberg & Fischer, 172.

Lamellibranchiata der Nordsee;
Schrader, 580.

Die Muscheln des niederländischen
Strandes; Dorsman, 186.

Muschelfischerei und Muschelzucht
in der nördlichen Zuiderzee; Hoek,
321.

Exkursion nach den Åland-Inseln;
Korvenkontio, 379.

Gulf of Finland, faunal list; Skorikov,
602.

Certain British Marine spp., notes
on; Marshall, 416 & 417.

Great Britain, *Fusus propinquus* Ald. var. *laevis* var. n. *consimilis*, sp. n.; **Marshall, 418.**

British Nudibranchiata, certain spp. figured and discussed; **Eliot in Alder & Hancock, 199.**

British Nudibranchiata, Synopsis of Families, Genera and Species; **Eliot in Alder & Hancock, 199.**

Britain, *Psammobia vespertina*, *feroensis*, *tellinella*, *costulata*, external characters of; **Bloomer, 54.**

Northumberland coast, occ. certain Nudibranchs; **Storow, 646.**

Coast of Northumberland, *Sthenoteuthis pteropus*, Verr., occ. of; **Gill, 247.**

Scarborough, occ. *Pholas crispata* and *P. candida*; **Irving Naturalist London, 1911 pp. 327-328.**

Ireland, occ. certain marine spp.; **Massy, 424.**

Channel Islands, *Donax variegatus*, varieties of; **Woodcock, 723.**

Guernsey and Scillies, *Cerithiopsis barleei* Jeffr., var. n.; **Marshall, 416.**

Bay of Cadiz, faunal list and notes on certain spp.; **Hidalgo, 315.**

Die Gastropoden des nordischen Planktons; **Simroth, 592.**

Die Heteropoden der Plankton Exp.; **Schiemenz, 578.**

North Atlantic, *Cirrothauma*, gen. and sp. n.; **Chun, 116.**

Iceland, *Margarita*, *Cyprina*, varr. n.; **Odhner, 468.**

Marine mollusca of Iceland in the collections of the Swedish State Museum; **Odhner, 468.**

Labrador, *Onchidiopsis*, sp. n.; **Balch, 23.**

Bahama-Inseln, *Megadenus holothuricola*, gen and sp. n.; **Rosén, 557.**

Bermuda, *Mitra*, *Columbella*, *Aclis*, *Turbonilla* (*Careliopsis*), *C. (Strioturbonilla)*, *Cerithiopsis*, *Fissuridea*, *Odostomia* (*Chrysallida*), *Ischnochiton* (*Stenoplax*), spp. n.; **Dall & Bartsch, 164.**

Bermuda, *Argyrodonax*, gen. & sp. n.; **Dall, 152.**

United States, Atlantic Coast, *Aclis*, spp. n.; **Bartsch, 33.**

Florida, *Spondylus echinatus*, occ. of; **Johnson, 350.**

Florida, Garden Key, occ. certain spp.; **Clapp 118.**

Mexico, *Marinula rhoadsi*, sp. n.; **Pilsbry, 513.**

Cuba, *Aclis*, spp. n.; **Bartsch, 33.**

Cuba, *Marginellopsis*, gen. & sp. n.; **Bavay, 44.**

Mediterranean Sea and Black Sea.

Coast of France, *Scala* (*Hemiaccirsa*), *Calliostoma*, *Phasianella*, spp. n.; **Dautzenberg, 168.**

Mediterranean (*Tribia*) *uniangulata* Desh., occ. of, and notes on; **Dautzenberg, 168.**

Cerithiidae: su taluni generi e specie di questa famiglia; **Monterosato, 445.**

"Porcupine" Exp., 1870, Station 24, *Mitra*, sp. n.; **Sykes, 648.**

"Porcupine" Exp., 1869, Station 65, *Buccinum*, sp. n.; **Sykes, 648.**

"Porcupine" Exp., 1869, Station 51 and 65, *Neptunea* (*Sipho*), sp. n.; **Sykes, 648.**

Talune Conchiglie viventi al Lido (Venezia); **De Gregorio, 264.**

Conchiglie mediterranee viventi e fossili; **De Gregorio, 266.**

Cerithium mediterranei viv. e foss. principalmente di Sicilia; **De Gregario, 265.**

Eteropodi; **Issel, 341.**

Cefalopodi planctonici; **Issel, 340.**

Gulf of Naples ("Taubenbank"), faunal list; **Walther, 698.**

Adriatic, list Pteropoda with notes on certain spp.; **Steuer, 641.**

Black Sea, South Coast, *Caecum*, sp. n.; **Milaszewicz, 440.**

Algeria, *Jolya letourneuxi* Bgt.; **Haas, 282.**

Note sur la présence sur la côte algérienne du *Gibbula tingitana* Pallary; **Pallary, 489.**

South Atlantic Ocean.

Sur quelques Mollusques de la Georgie du Sud et des îles Sandwich du Sud; **Lamy, 395.**

South Georgia, *Photinula* (*Kingo-trochus*), var. n.; **Lamy, 395.**

South Sandwich Islands, *Natica*, spp. n.; **Lamy, 395.**

Kerguelen, marine faunal list with synonymy; **Lamy in Baty, 396.**

S. Africa, *Phasianella*, sp. n.; **Smith, 606.**

Gold Coast, *Fissurella*, etc., occ. of; **Dupuis, 193.**

Indian Ocean, Red Sea.

Indian Ocean, *Pontiothauma*, *Pleurotoma* (*Surcula*), (*Bathytoma*), *Manaria*, *Natica*, *Columbella*, *Trophon* (*Boreotrophon*), *Nucula* (*Acila*), *Dentalium*, *Lepidopleurus*, spp. figured; **Annan-dale & Stewart, 12.**

Notes on Opisthobranchs of the Gulf of Tadjourah; **Vayssière, 684.**

Christmas Island, Indian Ocean, *Peristernia*, *Nassa*, *Cardium* (*Fragum*), *Brachydontes* (*Hermomya*), spp. n.; **Smith, 608.**

Christmas Island, faunal list; **Smith, 608.**

Bombay, *Acmaea*, sp. n. and notes on; **Smith, 604.**

India, *Echinospira*, *Limacosphaera*, spp. & gen. n.; **Simroth, 596.**

India (Orissa), *Modiola*, sp. n.; **Preston, 537.**

India (Travancore Coast), *Acmaea*, sp. n.; **Preston, 537.**

India (Lake Chilka), *Corbula*, *Modiola*, spp. n.; **Preston, 537.**

Mauritius, *Bornia* sp. n. **Lamy, 394.**

Mauritius, *Latirus*, spp. n.; **Melville, 434.**

Mauritius, *Cypraea*, sp. n.; **Vayssière, 633.**

Mauritius, *Vulgocerithium*, sp. n.; **Wood, 722.**

Südwest-Australiens, *Lucilina*, *Ischnochiton*, *Callistochiton*, *Acanthochites*, *Cryptoplax*, spp. n.; **Thiele, 656.**

South Australia, *Verticordia*, *Myrtæa* *Corbis*, *Puncturella*, *Gibbula*, *Danilia*, *Leptothyræ*, *Rissoa*, *Amphithalamus*, *Cerithiopsis*, *Marginella*, *Conus*, *Mitra*, *Ringicula*, spp. n.; **Hedley, 300.**

South Australia, faunal list and notes on certain spp.; **Hedley, 300.**

S. Africa, *Conus*, sp. n.; **Sowerby, 623.**

Malaysia.

Malay Archipelago, *Ancilla*, *Marginella*, *Cancellaria*, *Mitra*, *Fusus*, *Latirus*, *Peristernia*, *Chrysodomus* (*Sipho*), *Cyllene*, *Tritonidea*, *Phos*, *Nassa*, *Columbella*, *Trophon*, *Murex*, *Ocenebra*, *Urosalpinx*, *Latiaxis*, spp. & var. n.; **Schepman, 575.**

Pacific Ocean.

Tasmania, *Onoba*, sp. n.; **Hedley, 300.**

Tasmania, faunal list; **May, 428.**

Tasmania, *Marginella*, *Pisania*, *Hemipleurotoma*, *Drillia*, *Mangelia*, *Daphnella*, *Mitromorpha*, *Turritella*, spp. n.; **May, 429.**

Tasmania, *Cypraea angustata*, var. n.; **Vayssière, 683.**

Exotic mollusca at Coode Island; **Gabriel, 220.**

Additions and Alterations in the catalogue of Victorian Marine Mollusca; **Gatliff & Gabriel, 224.**

Victoria (Australia), additions to fauna; **Gatliff & Gabriel, 225.**

Victoria (Australia), *Columbella*, *Leiostraca*, *Cingulina*, *Cyclostrema*, *Saxicava*, spp. n.; **Gatliff & Gabriel, 226.**

Victoria, *Aclis*, *Odostomia*, *Turbonilla*, *Jeffreysia*, *Lucina*, *Edentellina*, *Cuna*, *Montacuta*, gen. and spp. n.; **Gatliff & Gabriel, 227.**

Queensland, catalogue of Marine Mollusca of; **Hedley, 301.**

Queensland, *Hexabranchus flammulatus* Q. and G., occ. of; **Wild, 714.**

New Caledonia, *Cypraea neglecta* monstr. *rouxi* F. Ancey.; **Vayssière, 683.**

China? *Scala pretiosa*, var. n.; **Smith, 613.**

Japan, *Stoloteuthis nipponensis*, sp. n. Japan; **Berry, 46.**

Japan, *Abraliopsis*, sp. n.; **Berry, 48.**

Japan, *Chaetoderma*, *Driomenia*, *Strophomenia*, spp. n.; **Heath, 299.**

Japan, *Venus stimpsoni* Gould, figured and redeser.; Jukes-Browne, 356.

Japan, *Polinices*, *Scala*, spp. n.; Pilsbry, 518.

Japan, *Polypus*, *Sepia*, spp. n., and certain spp. discussed; Wülker, 725.

Behring Sea, *Admete* sp. n.; Dall, 157.

Alentian Islands, *Herpomenia*, sp. n.; Heath, 299.

Kurile Islands, *Halomenia*, sp. n.; Heath, 299.

Hawaiian Isds., *Polypus*, *Stephanoteuthis*, *Stoloteuthis*, *Abralia*, *Chiroteuthis*, *Cranchia* (*Liocranchia*), *Helicocranchia*, spp. n., and list of known Hawaiian spp.; Berry, 43.

Hawaii, *Ctenosculum*, gen. n., *hawaiiense*, sp. n.; Heath, 298.

Hawaii, *Chaetoderma*, *Drepanomenia*, *Lophomenia*, *Pronomenia*, *Strophomenia*, spp. n.; Heath, 299.

Alaska, *Nodulus*, sp. n.; Bartsch, 38.

Alaska, *Polypus*, *Rossia*, spp. n.; Berry, 44.

Alaska, *Cerithiopsis*, sp. n.; Bartsch, 29.

Alaska, *Alvania*, sp. n.; Bartsch, 28.

Alaska, *Cerithiopsis*, sp. n.; Bartsch, 31.

Alaska, *Chaetoderma*, spp. n.; Heath, 299.

Alaska, *Leptogyra*, sp. n.; Bartsch, 26.

Vancouver Island, *Isapsis obtusa* Cpr., occ. of; Hanham, 294.

Vancouver Island, *Bittium* (*Semibittium*), sp. n.; Bartsch, 35.

Washington, *Cerithiopsis*, sp. n.; Bartsch, 29.

California, *Bittium*, *B.* (*Bittium*), *B.* (*Lirobittium*), *B.* (*Semibittium*), subgen. spp. & subspp. n.; Bartsch, 35.

California, *Nodulus*, sp. n.; Bartsch, 38.

California, *Cyclostrema* *Circulus*, *Cyclostremella*, spp. n.; Bartsch, 26.

California, *Cirroteuthis*, *Eledonella*, *Polypus*, *Loligo*, *Galiteuthis*, spp. n.; Berry, 44.

California, *Mopalia* (*Dendrochiton*), sp. n.; Berry, 45.

California, *Alabina*, sp. & subspp. n.; Bartsch, 27.

California, *Alvania*, spp. n.; Bartsch, 28.

California, *Cerithiopsis*, *C.* (*Cerithiopsis*), *C.* (*Cerithiopsida*), *C.* (*Cerithiopsidella*), spp. n.; Bartsch, 29.

California, *Diastoma*, spp. n.; Bartsch, 30.

California, notes on certain spp.; Dall, 159.

California, *Bathytoma*, *Modiolus*, spp. n.; Dall, 159.

California, *Leptothyra*, sp. n.; Dall, 158.

California, *Eupleura*, sp. n.; Dall, 160.

California, *Chaetoderma*, *Limifossor*, *Pachymenia*, *Dorymenia*, *Alexandromenia*, *Dondersia*, *Ichthyomenia*, spp. n.; Heath, 299.

Lower California, *Cerithiopsis*, spp. n.; Bartsch, 29.

West America, *Alaba*, sp. n.; Bartsch, 36.

West Coast of America, *Conus*, spp. n.; Dall, 156.

Mexico, *Alabina*, spp. n.; Bartsch, 27.

Mexico, *Alvania*, sp. n.; Bartsch, 28.

Panama, *Bittium* (*Bittium*), sp. n.; Bartsch, 35.

Panama, *Cyclostrema*, *Circulus*, spp. n.; Bartsch, 26.

Panama, *Lolliguncula* (?), sp. n.; Berry, 47.

Panama, *Cerithiopsis* (*Cerithiopsina*), sp. n.; Bartsch, 29.

Peru, Payta, list of marine mollusca; Germain, 237.

Chile, *Scalaria*, notes on; de Boury, 78.

Galapagos Isds., *Eumeta*, sp. n.; Bartsch, 37.

Galapagos Isds., *Alvania*, spp. n.; Bartsch, 28.

Galapagos Isds., *Cerithiopsis*, *C.* (*Cerithiopsis*), spp. n.; Bartsch, 29.

Straits of Magellan, *Cerithiopsis* sp. n.; Bartsch, 29.

Antarctic Ocean.

Antarctic, *Kellia*, *Solecardia*, *Lacuna*, *Lovenella*, *Vermicularia*, *Odostomiopsis*, *Trophon* spp. n.; **Hedley**, 303.

Antarctic, Cephalopoda of National Antarctic Exp. 1901–1904; **Hoyle**, 328.

Antarctic, *Tritoniella*, *Bathydoris*, *Doto*, *Notæolidia*, *Cuthonella*, *Galvinella*, spp. n.; **Eliot**, 197.

Antarctic, *Neobuccinum*, *Trophon*, *Thesbia* (?), *Admete*, *Amauropsis* (?), *Neoconcha*, *Trichoconcha*, *Eulima*, *Scala*, *Rissoia*, *Lovenella*, *Valvatella*, *Lepeta* (*Pilidium*), *Bullinella*, *Chaetopleura*, *Cuspidaria*, *Cardita*, *Kellia*, *Tellimya*, *Cyamium*, *Diplodonta*, *Philobrya*, *Limopsis*, *Lima* (*Limatula*), genn. & spp. n.; **Smith**, 605.

Antarctic, *Buccinum*, *Sipho*, *Cominella*, *Cerithium*, *Natica*, *Scissurella*, spp. & var. n.; **Lamy**, 392.

Antarctic, *Axinus*, *Arca* (*Batharca*), *Silicula*, spp. n.; **Lamy**, 393.

Pteropoda, certain spp. discussed; **Eliot**, 198.

(B) Non-Marine.

Sweden and Denmark. 2227 da

Schweden, relikte und fossile nördliche Binnenmollusken; **Hagg**, 291.

Swedish Lappland, *Pisidium*, sp. n.; **Odhner**, 467.

Danish Land snails; **Steenberg**, 632.

Russia. 2227 db

Russia, *Pupilla muscorum* Müll var. n.; **Lindholm**, 408.

Central Volga District, formal list; **Lindholm**, 407.

Ladogasees und der Nevabucht, *Valvata*, sp. n.; **Lindholm**, 406.

Central Russia *Hyalinia*, sp. n.; **Lindholm**, 405.

Russia, *Hyalinia*, sp. n.; **Lindholm**, 405.

Russia, *Hyalinia* notes on; **Lindholm**, 405.

Southern Russia. 2227 dbb

S. Russia, *Pseudanodonta rossmaessleri*, *maelurensis*, var. n.; **Kobelt** & **Haas** in **Rossmässler**, 561.

(N-9186 r)

Ciskaukasien, *Daudebardia*, *Helix Clausilia* spp. varr. & nom. n.; **Rosen**, 558.

Crimea, *Helix vermiculata* Müll, occ. of; **Rosen**, 559.

Germany. 2227 dc

Zur Mollusken-Fauna des Laacher Sees; **le Roi**, 553.

Neue Bürger in der heimischen Tier- und Pflanzenwelt; **Kalkreuth**, 359.

Beiträge zur Kenntnis der mittell-europäischen Najadeen. [Forts. folgt.]; **Kobelt**, 367.

Germany, Naidies, notes on; **Israel**, 339.

Germany, faunal list; **Boettger**, 58 & 60.

Germany, notes on certain spp.; **Pfeffer**, 506.

Germany, *Pseudanodonta elongata*, var. n.; **Kobelt** & **Haas** in **Rossmässler**, 561.

Beiträge zur Kenntnis der Fauna der weissen Elster; **Israel**, 338.

Rhine Provinces, faunal list with notes; **le Roi**, 552.

Rhine Provinces, occ. certain spp.; **le Roi**, 551.

River Neckar, *Unio batavus*, var. n. & notes on fauna; **Geyer**, 244.

Germany, Taunas, *Clausilia*, occ. of certain spp.; **Boettger**, 55.

Danube at Ratisbon, *Unio pictorum*, occ. of; **Clessin**, 127.

Upper Danube, *Unio*, subsp. n.; **Kobelt** in **Rossmässler**, 560.

S. Bavaria, *Vitrella*, sp. n.; **Clessin**, 123.

Silesia, *Acme*, sp. n.; **Clessin**, 125.

Beiträge zur Molluskenfauna von Magdeburg; **Honigmann**, 322.

Beiträge zur Molluskenfauna der Provinz Posen; **Müller**, 450.

Schleswig-Holstein, mollusca of; **Schermer**, 577.

Belgium. 2227 dd

Belgium, *Helix acuta*, occ. of; **Bouly de Lesdain**, 72.

Landmollusken. Ergänzungen und Berichtigungen zum 3. Bde. Nach des Verf. Tode fortgeführt v. Wilhelm Kobelt u. Gertrud Winter [*Cochlostyla*]; Kobelt in Möllendorff, 442.

Philippines, *Cochlostyla*, sp. n.; Kobelt in Möllendorff, 444.

Philippine Inds., *Cochlostyla*, *Leptopoma*, *Coptocheilus*, spp. & subsp. n.; Bartsch, 32.

Philippine Inds., *Vivipara*, spp. & subspp. n.; Bartsch, 34.

New Britain, Solomons, etc.

2227 ib

Bismarck Archipelago, *Partula*, sp. n.; Soós, 622.

Solomon Inds., *Placostylus* (*Leucocharis*), *Chloritis* (*Sulcobasis*), spp. n. & faunal list land and marine shells; Dall, 153.

Asiatic Turkey.

2227 ei

Syria, *Agriolimax*, *Succinea*, *Leucochroa*, *Helix* (*Euparypha*), (*Helio-manes*), *Buliminus* (*Ena*), *Cæcilioides*, *Vitrina*, *Limnæa*, spp. & varr. n.; Germain, 240.

Syria, *Agriolimax*, spp. n.; Germain, 239.

Syria, *Physa*, *Bullinus* (*Isidora*), *Bythinia*, *Valvata* (*Cinnina*), spp. & var. n.; Germain, 238.

Africa.

2227 f

Schari District (French Central Africa), list of spp.; Kobelt, 368.

N. Africa.

2227 fa

Marocco, *Melanopsis*, spp. n.; Pallary, 487.

Sahara, etc.

2227 fc

Lake Tchad, list of spp.; Kobelt, 368.

Lake Tchad, *Veronicella*, *Planorbis* (*Diplodiscus*), spp. n.; Germain, 230.

West Africa and Congo.

2227 fd-e

Senegambia, *Meladomus*, sp. n.; Kobelt in Martini & Chemnitz, 421.

French West Africa (Ivory Coast), *Eunea* (*Excisa*), *Trochonanina* (*Trochonzonites*), spp. n.; Germain, 232.

French Congo, *Burtoa*, sp. n.; Jousseau, 355.

French Congo, certain spp. cited and discussed with description of *Achatina marginata* var. n.; Germain, 231.

E. Africa, etc.

2227 ff

British East Africa, *Buliminus*, *Limicolaria*, spp. n.; Dall, 154.

British East Africa, *Urocyclus* (*Microcyclus*), *Trichotoxon* (*Dendrotoxon*), spp. n.; Pollonera, 533.

British East Africa (Naivasha), *Eunea*, *Thapsia*, *Pseudoglessula*, *Subulina*, *Curvella*, spp. n.; Preston, 536.

British East Africa, *Ennea*, *Thapsia*, *Zingis*, *Trachycystis*, *Acanthinula*, *Rachis*, *Cerastus*, *Jaminia*, *Fauculus*, *Clausilia*, *Limicolaria* (*Rebmanniella*), *Krapfiella*, *Homorus*, *Curvella*, *Kenia*, *Opeas*, *Ancylus*, *Pisidium*, gen. subgen. sec. & spp. n.; Preston, 538.

British East Africa, *Cleopatra*, description of animal; Smith, 609.

East Central Africa, *Ennea*, *Streptaxis*, *Rhytida*, *Vitrina*, *Helicarion*, *Trochonanina*, *Ena*, *Limicolaria*, *Achatina*, *Homorus*, *Pseudoglessula*, *Ancylus*, *Lanistes*, *Melania*, *Sphaerium*; Thiele, 655.

Ruwenzori, *Pisidium*, sp. n.; Germain, 230.

Kilimandjaro-Meru, *Achatina*, *Buliminus* (*Cerastus*), *Curvella*, *Cyclophorus* (*Cyclophoropsis*), *Edentulina*, *Ennea* (*Gulella*), *Helicarion*, *Helix*, *Limicolariopsis*, *Martensia*, *Opeas*, *Petriola*, *Thapsia*, (?) *Trochonanina*, *Trochonzonites*, *Vitrina*, gen. & spp. n.; d'Ailly, 5.

South Africa.

2227 fg

S. Africa, *Pupa*, spp. discussed and varr. n. described; Burnup, 96.

Madagascar.

2227 fh

Madagascar, *Unio* (*Nodularia*), U. (— ?), spp. n.; Germain, 234.

Canada.

2227 gb

E. Canada, notes on and occ. of certain spp.; L., 387.

Canada, *Helix hortensis*, occ. of; Clapp, 120.

Ontario, occ. *Lymnæa auricularia*;
Allen, 8.

Florida, occ. certain spp.; Hender-
son jr., 307.

Florida, *Unio*, sp. n.; Frierson, 216.

United States. 2227 gf

U.S. America, distribution of *Marg-
aritana monodonta* Say.; Walker, 694.

"Clinch and Holston Rivers"
[U.S.A. ?], *Unio*, nom. & sp. n.;
Frierson, 219.

N.E. United States. 2227 gg

New York State, Wellesley Isd.,
St. Lawrence River, faunal list;
Baker, 20.

New York State, *Polygyra* subsp. n.;
Pilsbry & Vanatta, 530.

Long Island, N.Y., *Helix hortensis*,
occ. of; Pilsbry, 525.

Molluscan fauna at High Pines,
Duxbury Beach, Mass.; Clapp, 121.

Nantucket, occ. of *Limax maximus*;
Cockerell, 129.

Pennsylvania, Monroe Co., faunal
list; Pilsbry, 524.

Pennsylvania, Northampton County,
faunal list; Caffrey, 98.

New Jersey, Atlantic City, list of
spp. collected; Pilsbry, 522.

Naiades of Cedar Point, Ohio;
Gary, 222.

Naiades of Grand river, Ohio;
Gary, 221.

Ohio, *Lymnæa auricularia*, occ. of;
Goodrich, 257.

The conchological survey of Michigan;
Walker, 695.

A check-list of Michigan Mollusca;
Walker, 693.

Michigan, *Galba*, sp. & varr. n.;
Baker, 19.

Indiana, *Galba*, var. n.; Baker, 19.

S.E. United States. 2227 gh

Virginia, *Galba*, sp. n.; Baker, 19.

Tennessee, occ. *Polygyoa* (*Triodop-
sis*) *obstricta* Say.; Wetherby, 710.

Tennessee, *Mesomphix*, subsp. n.;
Pilsbry, 519.

Alabama, *Pisidium*, spp. n.; Sterki,
638.

W. United States. 2227 gi

Missouri, Pearl River, occ. certain
spp.; Frierson, 215.

Arkansas, occ. certain spp.; Samp-
son, 572.

Some observations made on Little
river, near Wichita, Kansas, with
reference to the *Unionidae*; Clark &
Gillette, 122.

Rediscovery of some Conrad forms;
Dumble, 192.

Colorado, *Galba*, sp. n.; Baker, 19.

Texas, Sabine River, occ. certain
spp.; Frierson, 215.

Colorado, Tolland, occ. certain spp.;
Cockerell, 128.

Mollusca of the southwestern states.
4. The Chiricahua mountains, Arizona;
with bibliography; Pilsbry & Ferriss,
528.

Arizona, *Oreohelix*, *Pupilla*, subspp.
n.; Pilsbry & Ferriss, 529.

Arizona, *Sonorella*, *Oreohelix*, *Ash-
munella*, *Thysanophora*, *Holospira*,
Bifidaria, spp. & subspp. n.; Pilsbry
& Ferriss, 529.

California, *Galba* var. n.; Baker, 19.

California, *Epiphragmophora inju-
mata*, occ. of; Clapp, 119.

California, certain varieties of *Epiph-
ragmophora californiensis* discussed;
Edson, 196.

Mexico. 2227 gl

Mexico, *Schasicheila*, sp. n.; Wagner
in Martini & Chemnitz, 423.

Mexico, *Amnicola*, *Somatogyryus*,
Cochliopa, spp. n.; Pilsbry, 516.

Mexico, occ. certain spp.; Hinkley,
319.

Mexico, *Euglandina*, sp. n.; Bartsch,
39.

C. America. 2227 hb

Guatemala, *Schasicheila*, sp. n.;
Wagner in Martini & Chemnitz, 423.

Guatemala, *Omphalina*, sp. n.;
Bartsch, 39.

Panama Canal zone, *Pleurodonte*, *Thysanophora*, *Auris*, *Leptinaria*, *Salsiella*, *Guppya*, spp. & subsp. n.; Pilsbry, 523.

West Indies. 2227 hc

[West Indies] *Helix* (*Dentellaria*) *badia* Fér varr. n.; Smith, 614.

Barbados, *Lucidella*, sp. n.; Wagner in Martini & Chemnitz, 423.

St. Lucia, W. Indies, *Lucidella*, sp. n.; Wagner in Martini & Chemnitz, 423.

Jamaica, *Zaphysemata*, *Proserpinula*, *Sagda*, *Spirostoma*, *Varicella*, *Geomelania*, *Rhytidopoma*, *Aperostoma*, spp. & subsp. n.; Pilsbry & Brown, 527.

Jamaica, mollusca of Mandeville and its environs; Pilsbry & Brown, 527.

Jamaica, *Lucidella* sp. n.; Wagner in Martini & Chemnitz, 423.

Grand Cayman Isd., *Neocyclotus*, *Choanopoma*, *Chondropoma*, spp. n.; Preston, 539.

Cuba, occ. certain spp.; Henderson, 306.

Cuba, *Pachycheilus*, sp. n.; Preston, 534.

Cuba, *Pachycheilus violaceus* Preston, occ. of; Ramsden, 542.

Cuba, *Urocoptis* (*Gongylostoma*), spp. & varr. n.; de la Torre, 665.

Ecuador. 2227 he

Ecuador, *Veronicella*, *Bulimulus* (*Scutalus*), *Anodonta* (*Glabaris*), spp. & varr. n.; Germain, 236.

Peru. 2227 hf

Peru, land shells collected by Dr. Hiram Bingham; Dall, 155.

Peru, *Bulimulus*, *Clausilia*, spp. n.; Dall, 155.

Brazil. 2227 hg

Brazil, *Helicina*, *Alcadia* (*Eualcadia*), spp. n.; Wagner in Martini & Chemnitz, 423.

Chili. 2227 hk

Chili, *Chilina*, list of and notes on; Germain, 233.

New Guinea, etc. 2227 ia

German New Guinea, *Pterocyclus*, sp. n.; Kobelt in Martini & Chemnitz, 421.

German New Guinea, *Diaspira*, *Pupina*, *Moulinsia*, *Palaina*, *Melania*, *Charopa*, *Sitala*, gen. spp. & var. n.; Soos, 622.

Atlantic Islands. 2227 l

Canary Isds., *Helicodonta*, sp. n.; Gude, 271.

Atlantic. 2227 la

Bermuda, *Physa*, *Ancylus* (*Ferrissia*), *Paludestrina*, *Pisidium*, spp. n., and faunal list of land and freshwater shells; Vanatta, 678.

Kerguelen, list of land mollusca; Germain in Baty, 243.

Indian Ocean. 2227 m

Mauritius, *Achatina panthera* monstr.; Dautzenberg, 169.

Seychelles, *Ennea*, *Priodiscus* (?), spp. n.; Sykes, 649.

Pacific. 2227 n

Juan Fernandez Isd., *Fernandezia*, gen. & sp. n.; Pilsbry, 514.

Hawaiian Islands, distribution of species of *Amastrea*; Pilsbry, 517.

Hawaiian Isds., *Amastrea*, list of spp.; Pilsbry, 517.

Hawaiian Isds., *Planamastra*, *Armisia*, *Amastrea* (*Cyclamastra*), (*Metamastra*), (*Amastrella*), genn. spp. & subsp. n.; Pilsbry, 515.

Hawaiian Isds., *Leptachatina*, *L.* (*Labiella*), *L.* (*Pauahia*), (*Thaanumia*), (*Ilikala*), *Carelia*, *Pterodiscus*, subgenn. spp., subsp. & var. n.; Pilsbry, 514.

(b) FOSSIL.

Cainozoic.

Black Sea, South Coast, Cainozoic, *Neritina*, sp. n.; Milaszewicz, 440.

France, Neogene, *Petricolaria*, *Cardium*, *C.* (*Ringicardium*), (*Trachycardium*), (*Loxocardium*), (*Lævicardium*), *Chama*, *Erycina*, *E.* (*Scacchia*), *E.* (*Hemilepton*), *E.* (*Semierycina*), spp. & mut. n.; Cossmann & Peyrot, 145.

- Roumania, Neogen, *Unio*, *Proso-*
dacna, spp. & varr. n.; **Teisseyre**, 653.
- Japan, Pleistocene, lists of spp.;
Yabe, 726.
- Shells found in the alluvial deposits
of Seckbach near Frankfurt a. M.;
Wenz, 706.
- Über die postglaziale Wärmezeit und
die Molluskenfauna der Ostsee; **Ser-**
nander, 585.
- Portugal, Cainozoic, *Patula* (*Janu-*
las), *Helix*, *H. (Iberus)*, *H. (Macularia)*,
Nystia, *Limnæa*, *Cyclostoma*, *Melania*,
spp. n.; **Roman**, 556.
- Schweden, Entwicklung der Mol-
luskenfauna in dem Kalktuffe bei Skul-
torp; Tabellarische Übersicht der
quartären Molluskenfauna Schwedens;
Odhner, 466.
- Sweden, Cainozoic, *Pupa moulin-*
siana, occ. of; **Odhner**, 470.
- Norway, fossil mollusca and late
quaternary climate; **Øyen**, 480.
- Cyrenaica, Cainozoic, *Æquiptecten*,
sp. n. and notes on and figs. of certain
spp.; **Newton**, 462.
- Southern Nigeria, Cainozoic, *Arca*,
Barnea, spp. n.; **Newton**, 460.
- Germany, Cainozoic, occ. certain spp.;
Neuenhaus, 458.
- Preliminary report on boulders of
Swedish and Baltic rocks in the South-
west of Norway [*Cyprina*, *Yoldia*];
Milthers, 441.
- Germany, Cainozoic, *Omphalosagda*,
Helicodonta, *Cochlicopa* (*Zua*), *Acan-*
thinula, *Limnophysa*, *Melanopsis*, spp.
varr. & mut. n.; **Jöcs**, 353.
- Arctic regions, marine mollusca and
post glacial changes of climate; **Jensen**
& **Harder**, 348.
- England, Barrington Beds, Cainozoic,
occ. certain spp.; **Hughes**, 329.
- Südl. Südamerika, postglaziales
Klima-Optimum; **Hägg**, 290.
- Schweden, Postglaziales Klima-Op-
timum; **Hägg**, 289.
- W. Sweden, Quaternary sea-
bottoms; **De Geer**, 176.
- North America, Marine mollusca and
climatic changes; **Dall**, 161.
- Ontario, changes of climate; **Cole-**
mann, 132.
- Bermuda, Cainozoic, extinct endemic
land mollusca; **Bullen**, 90.
- Chicago, Cainozoic, occ. certain spp.;
Baker, 21.
- America, St. Lawrence valley,
Climatic conditions; **Adams**, 1.
- Loanda, Cainozoic, *Senilia senilis*,
ore of; **Andrade**, 11.
- Iceland, Fossil mollusca and changes
of climate; **Bardarson**, 24.
- Norway, Quaternary, contributions
to geology of; **Øyen**, 481.
- Quaternary of the Valley of the
Ain, France, faunal list; **Sayn**, 573.
- France, Quaternary, notes on and occ.
of certain spp. *Limacidae* and *Helicidae*
in Touraine beds; **Collet**, 137.
- Glacial Lake near Moira, Antrim,
occ. certain spp.; **Swain** Irish Nat.
Dublin 20 p. 136.
- Post glacial climatic changes and
mollusca; **Petersen**, 502.
- Upper Estuarine Beds of Gristhorpe,
Yorks, occ. of *Unio distortus* and
Alasmodon vetustus; **Jackson**, 345.
- Yorkshire, Estuarine Series, *Unio*
notes on and descr. of n. sp.; **Jackson**,
343.
- Die pleistocäne Conchylienfauna der
Umgebung des Balatonsees; **Weiss**,
702.
- Ungarn, Pleistozänfauna des Komit-
ates Nyitra; **Kormos**, 377.
- Hungary, Pleistocene, Faunal list,
Vallonia, *Chondrula*, *Limnophysa*, *Tro-*
pidiscus, *Gyrorbis*, *Gyraulus*, *Armiger*,
Bithynia, *Cincinna*, *Valvata*, sp. &
varr. n.; **Kormos**, 372.
- Zur Kenntnis der geologischen und
faunistischen Verhältnisse des Nagy-
berek-Moeres im Komitat Somogy;
Kormos, 373.
- Hungary, Pleistocene *Vivipara*, *Pisi-*
dium, varr. n.; **Kormos**, 374.
- Die pleistocäne Mollusken-Fauna im
Ostabschnitte des Gebietes jenseits der
Donau; **Kormos**, 375.
- Cockburn Isd., Antarctic, Pleisto-
cene, *Myochlamys*, sp. n.; **Hennig**,
308.
- Norway, Ranen River, Pleistocene,
occ. certain spp.; **Grønlie**, 269.

Cyrenaica, Pleistocene, faunal list; Gregory, 267.

California, Pleistocene, *Alabina*, spp. n.; Bartsch, 27.

California, Pleistocene. *Bittium* (*Lirobittium*), spp. & subsp. n.; Bartsch, 35.

California, Pleistocene, Genus *Dia-stoma*; Bartsch, 30.

California, Pleistocene, *Cerithiopsis*, *C.* (*Cerithiopsisina*), spp. n.; Bartsch, 29.

California, Pleistocene, *Alvania*, spp. n.; Bartsch, 28.

Post-Tertiary.

Interglaziale und postglaziale Meeres mollusken aus Feuerland und Südpatagonien als Beweis für ein wärmeres Klima als das jetzige; Hägg, 283.

Norway (Forneboland and Snarden), Post Tertiary, faunal list; Werenskiöld, 708.

Cromerian (Forest Bed), Norfolk, *Valvata*, *Sphaerium*, spp. n.; Kennard, 361.

Norway, Fredrikshald region, Post Tertiary, *Portlandia arctica*, occ. of; Øyen, 485.

Norway, Trondhjem region. I.; Øyen, 483 & 484.

Norway, Jarlsberg region; Øyen, 482.

Tertiary.

Tertiary, Europe. Einige Worte zu: Noch einmal „Die Verwandtschaftsbeziehungen der *Helix* Arten aus dem Tertiär Europas“ von Prof. Dr. O. Boettger in Frankfurt (Main); Boettger, 57.

Antarctic, Tertiary, *Nucula*, *Phacoides*, *Venus*, *Cytherea*, *Donax*, *Mactra*, *Lutraria*?, *Panopaea*, *Struthiolarella*, *Cyrtochetus*?, *Trophon*, *Bulla*, *Bullinella*, *Dentalium*, *Chrysodomus*? spp. n.; Wilckens, 713.

Germany, Tertiary, *Arionidae*, with descr. of spp. n.; Wenz, 707.

Germany, Tertiary, *Klikia*, varr. n.; Wenz, 704.

S.-W. Russia, Tertiary, Mollusken der sarmatischen; Spuliskij, 627.

Transbaikalia, Tertiary?, *Cerithium*, *Limnaeus*, *Cyrena*, spp. n.; Reis, 547.

Hungary, Tertiary, *Lima* (*Mantellum*), *Sepia*, *Mitrularia* spp. n.; Lörenthey, 410.

Bohemia, Tertiary, faunal list; Kaika, 358.

Hungary, Tertiary, *Unio*, *Limnocardium*, *Vivipara*, *Bithynia*, *Melanopsis*, *Limnaea*, *Planorbis*, *Helix*, *Pupa*, spp. n.; Holaváts, 292.

Portugal, Tertiary *Donax*, sp. n.; Dollfus & Cotter, 184.

Algeria, Tertiary, *Pleurotoma* (*Eopleurotoma*), (*Hemipleurotoma*), *Surcula*, *S.* (*Apiotoma*), *Xenophora* (*Tugurium*), *Turritella*, *Mesalia*, *Tritonidea*, *Tritonium* (*Sassia*), *Cancellaria*, *Fusus*, *Lyria*, *Mitra*, *Planorbis*, *Cytherea*, *C.* (*Meretrix*), *Lucina*, *Cardita*, *Arca* (*Fossularca*), spp. & varr. n.; Daresté de la Chavanne, 166.

Asia Minor, Tertiary, *Vola*, sp. n.; Broili, 82.

Tasmania, Older Tertiary, *Lorica*, sp. n.; Hull, 330.

France, Gironde, Upper Tertiary, *Cerithium* (*Theridium*), (*Ptychocerithium*), (*Tiaracerithium*), (*Hemicerithium*), (*Semivertagus*), *Bittium* (*Bittium*), *Potamides* (*Tympanotomus*), (*Pirenella*), spp. & varr. n.; Vignal, 685.

Panama, Upper Tertiary, *Arca*, *Cardium*, *Columbella* (*Atilia*), *C.* (*Strombina*), *Conus* (*Cheliconus*), *Conus*, *Corelliophila*, *Crepidula*, *Cyclostrema*, *Dentalium*, *Lucina* (*Codakia*), *Pecten*, *Pectunculus* (*Axinaea*), *Phos*, *Pleurotoma* (*Drillia*), *Terebra*, spp. n.; Toula, 667.

Upper Tertiary of the Isd. of Cos; Newton, 461.

Upper Pliocene, occ. of and notes on; *Monodonta* and certain *Trochidae*; Meli, 433.

Georgia, Pliocene, *Potamides*, *Paludetrina*, *Amnicola*, *Planorbis*, spp. n.; Aldrich, 7.

Tehuantepec, Pliocene, *Cancellaria*, *Marginella*, *Mitra*, *Nassarina*, *Murex* (*Trophon*), *Pleurotoma* (*Clathurella*?), *P.* (*Glyphostoma*), *Lucina*, *Pecten* (*Amussium*), varr. & spp. n.; Toula, 668.

Hungary, Pliocene, *Congerina ungula*, var. n.; Vitalis, 688.

Costa Rica, Pliocene ?, *Dentalium*, sp. n.; Pilsbry, 520.

Italy (Isola Citera), Pliocene, faunal list; Nelli, 457.

Hungary, Pliocene, Faunal list; *Anodonta*, *Monodacna* (*Pseudocatillus*), *Limnocardium*, *Limax*, *Helix* (*Aegista*), *Xerophila*, *Triptychia*, *Planorbis*, *P.* (*Gyraulus*), *P.* (*Segmentina*), *Odonotogyrorbis*, *Purgula*, *Vivipara*, *Valvata*, *V.* (*Cincinna*), gen. spp. & var. n.; Lörenthey, 409.

Hungary, Pliocene, *Emmericia*; Kormos, 376.

East Anglia, Pliocene, *Limnæa*, *Planorbis*, spp. n.; Kennard & Woodward, 363.

California, Pliocene, certain spp. of *Pleurotomidae* discussed; Buell, 88.

Italy (S. Benedetto del Tronto), Pliocene, faunal list; Brest, 81.

Mexico, Pliocene, occ. certain spp.; Böse, 68 & 69.

California, Pliocene, *Bittium* (*Lirobittium*), spp. n.; Bartsch, 35.

Lower Pliocene of Millas (Pyrenées-Orientales), list of spp.; Laurent Maurette Lyon Ann. soc. linn. 57 1910 [1911] pp. 4-6.

France, Miocene, *Cerithium*, mut. n.; Wood, 722.

Austria, Miocene, *Aequipecten*, *Amiantis*, *Amussipecten*, *Anomia*, *Arca*, *A.* (*Anadara*), *Cardita* (*Actinobulus*), *Cardium*, *Callista*, *Callistotapes*, *Chlamys*, *Cyrena*, *Dosinia*, *Gastrana* (*Fragilia*), *Hemitapes*, *Isocardia*, *Lutraria*, *Macrochlamys*, *Mactra*, *Manuspecten*, *Mytilus*, *Ostrea*, *O.* (*Ostreola*), *Pecten*, *Pectunculus* (*Axinea*), *Pholadomya*, *Psammobia* (*Psamotæa*), *Pycnodonta*, *Ringicardium*, *Thracia*, *Trapezium* (*Cypricardia*), *Venus* (*Circumphalus*), *V.* (*Omphaloclathrum* ?), spp. var. & nomm. n.; Schaffer, 574.

Chesapeake Miocene, *Ecphora*, sp. n.; Pilsbry, 511.

Cyrenaica, Miocene, faunal list; Gregory, 267.

Mexico, Miocene, *Terebra* (*Myurella*), *Conus*, *Drillia* (*Crassispira*), *Mitra* (*Cancilla*), *Nassa* (*Uzita* ?), *Bittium*; Engerrand & Urbina, 200.

France, Miocene, *Sperulirostra belardi* d'Orb., occ. of; Courjault, 147.

Upper Miocene, *Acme*, spp. n.; Clessin, 125.

Victoria (Australia), Batesford Limestone, list of spp.; Chapman, 110.

France, Miocene, *Scala*, *S.* (*Gyroscala*), spp. n.; de Boury, 74.

Hungary, Upper Oligocene, *Strombopugnellus digitolabrum*, gen. & sp. n.; Koch, 369.

A new Haitian Oligocene horizon; Pilsbry, 512.

Jamaica, Oligocene, *Dentalium* (*Epi-siphon*), *Cadulus*, spp. n.; Pilsbry, 520.

Haiti, Oligocene, *Potamides*, *Arca*, spp. n.; Pilsbry, 512.

Florida, Oligocene, *Actæon*, *Terebra*, *Conus*, *Pleurotoma*, *Drillia*, *Mangilia*, *Clathurella*, *Glyphostoma*, *Olivella*, *Marginella*, *Persicula*, *Caricella*, *Perplicaria*, *Mitra*, *Fasciolaria*, *Siphonalia*, *Phos*, *Nassa*, *Astyrus*, *Murex*, *Trivia*, *Erato*, *Bittium*, *Cerithiopsis*, *Isapsis*, *Litiopa*, *Natica*, *Adorbis*, *Scala*, *Eulima*, *Niso*, *Syrnola*, *Astrarium*, *Calliostoma*, *Lucapinella*, *Dentalium*, *Cadulus*, *Perna*, *Venericardia*, *Corbula*, *Codakia*, *Phacoides*, *P.* (*Bellucina*), *Bornia*, *Pitaria* (*Lamelliconcha*), *Semele*, spp. & var. n.; Maury, 427.

Rochefortia, *Kellya*, *K.* (*Bornia*), *K.* (*Planikellya*), *K.* (*Lasaeokellya*), *K.* (*Divarikellya*), *Pseudolepton*, *Spaniorinus*, *S.* (*Lasæina*), *S.* (*Aligena*), *Sportella*, *Diplodonta*, *D.* (*Felaniella*), *Lucina* (*Loripinus*), *Miltha*, *M.* (*Gibbolucina*), *M.* (*Eomiltha*), *Myrtea*, *Codakia* (*Jagonia*), *Phacoides*, sec. spp. var. & mut. n.; Cossmann & Peyrot, 145.

Panama, Oligocene, *Terebra*, *Conus*, *Drillia*, *Cancellaria*, *Mitra*, *Marginella*, *Solenostæira*, *Phos*, *Metula*, *Anachis*, *Strombina*, *Murex*, *M.* (*Phyllonotus*), *Typhis*, *Bittium*, *Turritella*, *Cheilea*, *Nucula* (*Acila*), *Leda*, *Arca*, *Glycymeris*, *Pecten*, (*Aequipecten*), *P.* (*Amussium*), *Ostrea*, *Cardium* (*Trachycardium*), *Chione*, *Pitar*, *Teredo*, spp. n.; Brown & Pilsbry, 84.

Santo Domingo, Oligocene, *Strombina*, spp. n.; Brown & Pilsbry, 84.

Costa Rica, Oligocene, *Turritella*, sp. n.; Brown & Pilsbry, 84.

France, Lower Eocene, *Cerithiopsis*, *Lima*, spp. n.; **Pezant, 504.**

France, Eocene, *Cerithium*, *Vicino-cerithium*, *Potamides*, *Potamidiopsis*, gen. spp. & mutt. n.; **Wood, 722.**

Mexico, Eocene, occ. certain spp.; **Villada, 687.**

Austria-Hungary, Eocene, certain spp. discussed; **Kuźniar, 386.**

Eozän, Verbreitung der *Gryphaea* *Eszterházyi* Pávay; **Koch, 370.**

Midway-Penambuco Fauna; **Harris, 297.**

Italy, Eocene, *Collonia* (*Parvirota*), *Hipponyx*, *Muricopsis*, *Corbis*, *Meretrix* (*Tivelina*), spp. n., also list of and notes on certain spp.; **Fabiani, 201.**

The genus *Belosoepiella* De Al.; **Brunati, 85.**

Texas, Eocene, *Akera*, sp. n.; **Aldrich, 6.**

Alabama, Eocene, *Tellina* (*Angelus*), *Ervilia*, *Retusa*, *Scobinella*, *Pleurotoma* (*Bathytoma*), *Bittium* (*Stylidium*), *Thais*, *Turbonilla*, (*Mormula*), *Eulima*, *Cerithiopsis*, *Odostomia* (*Pyrgulina*), *Discohelix*, *Chlorostoma*, *Neritina*, *Crassatellites*, spp. n.; **Aldrich, 6.**

Mississippi, Eocene, *Cardium* (*Trachycardium*), *Scobinella*, *Lyrischapa*, spp. n.; **Aldrich, 6.**

Cyrenaica, Upper Eocene, faunal list; **Gregory, 267.**

Mesozoic.

Mesozoic Zones, mollusca of; **Newton, 459.**

Cretaceous.

Crimea, Upper Cretaceous, notes on; **Sloudsky, 603.**

S. Russia, Upper Cretaceous, *Inoceramus*, sp. n.; **Rogala, 550.**

Poland, Upper Cretaceous, *Acanthoscaphites*, sp. n.; **Nowak, 464.**

Kreidefossilien aus der Teufelschlucht bei Kronstadt; **Toula** Wien Abh. Geol. Rechs. Anst. 20 1911 pp. 34-35.

Hunton Bridge, Cretaceous, occ. certain spp.; **Hertford** Trans. Nat. Hist. Soc. 14 p. 191.

England, Cretaceous, *Inoceramus*, sp. & nom. n.; **Woods, 724.**

Antarctic Cretaceous, *Pinna*, *Lima*, *Ostrea*, *Nucula*, *Malletia*, *Nordensk-joldia*, *Cucullaea*, *Limopsis*, *Trigonia*, *Astarte*, *Phacoides* (*Cavilucina* ?), *Veniella*, *Cytherea*, *Panopaea* ? (*Pleuromya* ?), *Sphaerium*, *Nacella* (*Anisomyon* ?), *Acmaea* ? *Pleurotomaria*, *Amberleya*, *Capulus* ?, *Vanikoro*, *Eunaticina* ?, *Turritella*, *Peressoptera*, *Cassidaria*, *Fusus*, *Cryptorhytis*, gen. & spp. n.; **Wilckens, 712.**

Seistan, Cretaceous, *Chondrodonta* sp. n.; **Vredenburg, 691.**

West Prussia, Senonian, *Cardium*, *Exogyra*, *Pecten*, spp. n.; **Vogel von Falckenstein, 689.**

Hungary, Cretaceous, *Rhacophyllites*, sp. n.; **Toula, 670.**

France, Cretaceous, *Sauvagesia*, *Biradiolites*, spp. n.; **Toucas, 666.**

Yorkshire, Cretaceous, *Actinocamax quadratus*, occ. of; **Stather, 630.**

Transcaspia, Cretaceous, *Aucellina*, sp. n.; **Sokolov, 618.**

South Russia, Cretaceous, *Sonneratia*, *Desmoceras*, *Turbo*, spp. n.; **Sirizow, 601.**

Austria-Hungary, Cretaceous, occ. certain spp.; **Rydzewski, 567.**

Savoy, Cretaceous, lists of spp.; **Révil, 549.**

Notes on Hippurites; **Parona, 495.**

Italy (Isola di Lissa), Cretaceous, *Durania*, sp. n.; **Parona, 494.**

Buckinghamshire, Cretaceous, *Desmoceras*, sp. n.; **Noble, 463.**

Southern Nigeria, Cretaceous, *Veniella*; **Newton, 460.**

France, Cretaceous, *Glauconia*, spp. n.; **Mazeran, 430.**

German East Africa, Cretaceous, *Avicula*, *Pinna*, *Perna*, *Vola*, *Ostrea*, *Trigonia*, *Protocardia*, *Venus*, *Nautilus*, *Phylloceras*, *Lytoceras*, *Holcostephanus*, *Desmoceras* (*Puzosia*), *Crioceras*, *Ancyloceras*, spp. n.; **Krenkel, 384.**

S.-E. France, Cretaceous, occ. certain spp.; **Kilian & Reboul, 365:** and **Kilian, 364,**

Midway-Pernambuco Fauna; **Harris**, 297.

Bohemia, Cretaceous, illustrated faunal list; **Frië**, 212.

Palestine, Cretaceous, *Hippurites* (*Hippuritella*), *Biradiolites*, *Præradiolites*, *Durania*, spp. n.; **Douvillé**, 187.

Egypt, Cretaceous, *Bourmonia*, *Rudistes*, spp. n.; **Douvillé**, 187.

Algeria, Cretaceous, ? *Sphaerocaprina*, *Hippurites* (*Vaccinites*) *rousseli*, *Præradiolites*, *Bourmonia*, *Rudistes*, var. & spp. n.; **Douvillé**, 187.

Persia, Cretaceous, *Polyptychus*, *Hippurites* (*Hippuritella*), spp. n.; **Douvillé**, 187.

Elbœuf, Cretaceous, faunal list; **Coulon**, 146.

Mexico, Cretaceous, occ. certain spp.; **Burckhardt**, 93 & 94.

Mexico, Cretaceous, *Schleobachia*, *Pinna*, *Lima* (*Mantellum*), *Pecten*, *Vola*, *Plicatula*, *Ostrea* (*Alectryonia*), *Nucula*, *Trigonia*, *Cardita*, *Corbis* (*Mutiella*), *Cardium*, *Cytherea*, *Tapes*, *Homomya*, *Phaladomya*, *Turbo*, *Helio-cryptus*, *Tylostoma*, spp. & nom. n.; **Böse**, 70 & 71.

Switzerland, Cretaceous, *Azinus*, *Solariella*, *Margaritella*, *Astrarium*, *Eutrochus*, *Trochus*, *T.* (*Ziziphinus*), *Natica*, *Cerithium*, *Drepanocheilus*, *Pyrgulifera*, *Avellana*, *Bullinella*, *Tornatellaea*, *Tetragonites*, *Baculites*, spp. n.; **Böhm & Heim**, 64.

Saskatchewan, Cretaceous, *Pleurolimnea* var. n.; **Baker**, 19.

Germany, Cretaceous, *Inoceramus*, spp. n.; **Andert**, 10.

Germany, Lower Cretaceous, *Aucellina*, *Modiola*, *Nucula*, *Leda*, *Pleurotomaria*, *Turbo*, *Trochus*, *Scalaria*, *Cerithium*, *Fasciolaria*, spp. n.; **Wollemann**, 720.

Jurassic.

Gervillia, notes on certain lower and middle Jurassic species; **Paris**, 491.

Hungary, Jurassic, *Reineckia*, *Stephanoceras*, *Cosmoceras*, *Perisphinctes*, *P.* (*Grossouvria*), *Villama*, *Haploceras*,

Hecticoceras, *Lytoceras*, *Phylloceras*, *P.* (*Sowerbyceras*), gen. spp. & nom. n.; **Till**, 658 & 659.

Hungary, Jurassic, *Harpoceras*, *Hildoceras*, *Lytoceras*, *Nautilus*, *Phylloceras* spp. & var. n.; **Vadasz**, 676.

Hungary, Jurassic, *Modiola*, *Solemya* (?), *Homomya*, *Ceromya* (*Iso-cardia*), spp. n.; **Toula**, 669.

Cuba, Jurassic, notes on certain Ammonites; **de la Torre**, 664.

France, Jurassic, *Achidocheilus*, *Hadrocheilus*, *Nautilus* (*Rhyncholithes*), spp. n.; **Till**, 660.

Egypt, Jurassic, *Nautilus* (*Rhyncholithes*), sp. n.; **Till**, 660.

N. Siberia, Neocomian, *Olcostephanus*, sp. & var. n.; **Sokolov**, 617.

Roumania, Jurassic, *Ostrea*, *Placopsis*, *Mytilus*, *Lithodomus*, *Cardium*, *Pleurotomaria*, spp. n.; **Simionescu**, 588.

Savoy, Jurassic, lists of spp.; **Révil**, 549.

England, Jurassic, *Gervillia acuta*, note on and new name for; **Paris**, 492.

England, Jurassic, *Gervillia*, *Perna*, spp. n.; **Paris**, 490 & 491.

New Zealand, Jurassic, *Phylloceras*, *Orthoceras*, *Ægoceras*, spp. n.; **Marshall**, 419.

Borneo, Lower Lias, *Ægoceras*, sp. n.; **Krause**, 383.

Italy, Jurassic, *Discohelix*, *Trochus*, *Calliostoma*, *Chrysostoma*, *Teinostoma*, *Promathildia*, *Chemnitzia*, *Zygopleura* ?, *Cupeniella*, gen. spp. & var. n.; **Gemmellaro**, 229.

East Africa, Jurassic, *Aspidoceras*, *Astarte*, *Lytoceras*, *Macrocephalites*, *Peltoceras*, *Perisphinctes*, *P.* (*Virgatosphinctes*), *Proplanulites*, *Phylloceras*, spp. n.; **Dacqué**, 151.

Portugal, Lias and Dogger, occ. certain spp.; **Chcifat**, 112.

Mexico, Jurassic, *Neumayria*, *Opelia*, *O.* (*Neumayria*), *Macrocephalites*, *Perisphinctes*, *Simoceras*, *Aspidoceras*, *Idoceras*, *Aulacostephanus*, *Haploceras*, *Craspedites*, *Eurynoticeras*, *Virgatites*, *Phylloceras*, gen. & spp. n.; **Burckhardt**, 93.

Mexico, Jurassic, occ. certain spp.; Burekhardt, 92 & 94.

Switzerland, Jurassic, occ. certain spp.; Brändlin, 80.

Austria, Jurassic, *Diceras*, *Alectryonia*, *Aptychus*, *Cerithium*, *Gténostreon*, *Pseudomelania*, *Purpuroidea*, *Pteroceras*, *Simoceras*, *Turbo*, *Tylostoma*, *Patella* (*Helcion*), *Pecten*, *Perisphinctes* (*Aulacosphinctes*), *P.* (*Virgatosphinctes*), *Pleurotomaria* (*Leptomaria*), *Hamites*?, *Himalayites*, *Holcostephanus* (*Virgatites*), *Isosarca*, *Nerinea*, *Nerita*?, *Oppelia*, spp. & var. n.; Blaschke, 53.

Triassic.

Pelecypoden vom Flusse Dalgolach, Triassic; Wittenburg, 717.

Timor, Triassic, *Flemingites*, *Meekeoceras*, *Aulacoceras*, spp. n.; Wanner, 699.

Zur Kenntniss der arktischen Trias; Stolley, 645.

Roumania, Triassic, *Ptychites*, *Japonites*, spp. n.; Simionescu, 589.

Roumania (Insula Popina), Triassic, fauna of; Simionescu, 590.

S. Dalmatia, Triassic, *Proteites*, *Xenaspis*, *Arcestes* (*Proarcestes*), *Megaphyllites*, *Ptychites*, spp. n.; Salopek, 571.

Montenegro, Triassic, *Japonites*, sp. n.; Salopek, 571.

New Zealand, Triassic, *Orthoceras*, *Agoceras*, *Arcestes*, spp. n.; Marshall, 419.

Hungary, Triassic, *Balatonites*, *Celites*, *Gymnites*, *Lecanites*, *Orthoceras*, *Pleuronautilus*, *Ptychites*, *Sirenites*, *Trachyceras*, *T.* (*Protrachyceras*), spp. varr. & mut. n.; Frech, 211.

Hungary, Triassic, *Caronites*, *Cuspidaria*, *Gervilleia*, *Gonodus*, *Leda*, *Macrodus*, *Myophoria*, *Natiria*, *Nucula*, *Pecten*, *Pinacoceras*, *Pseudomonotis*, spp. varr. & mut. n.; Frech, 210.

Hungary, Triassic, *Anolcites*, *Arpadites*, (*Ditmarites*), *Balatonites*, *Ceratitis*, *Hungarites*, spp. n.; Diener, 182.

Neue Cephalopoden-Funde aus den Werfener Schichten und dem Muschelkalk de südl. Bakonygebirges und, Revision der Cephalopoden-Fauna des Muschelkalks; Arthaber, 17.

Albania, Triassic, *Acrochordiceras*, *Arianites*, *Aspidites*, *Beatites*, *Celites*, *Columbites*, *Dagnoceras*, *Epicelites*, *Hedenstroemia*, *Isculites*, *Lecanites*, *Meekoceras*, *Paragoceras*, *Paranannites*, *Prenkites*, *Pronorites*, *Procarnites*, *Prosphingites*, *Proptychites*, *Protropites*, *Tropicelites*, *Xenaspis*, *Xenodiscus*, gen. and spp. n.; Arthaber, 16.

Roumania, lower Triassic, occ. certain spp. and *Nautilus* (*Mojavaroceras*), sp. n.; Simionescu, 591.

Permian.

Nottinghamshire, Upper Magnesian Limestone, faunal list; Sherlock, 578.

Palaeozoic.

Palaeozoic zones, Mollusca of; Newton, 459.

Persia, Palaeozoic, *Orthoceras*, *Xenodiscus* (*Paraterolites*?), *Popanoceras*, *Stephanites*, gen. & spp. n.; Stoganow, 644.

Carboniferous.

Yorkshire, Coal Measures, list of spp.; Culpin, 149.

England, Carboniferous, occ. certain spp.; Wilson, 716.

Northumberland, Bernician, faunal list; Smith, 616.

Scotland, Carboniferous, list of spp.; Smith, 612.

Pennsylvania, Carboniferous, *Gla-phurochiton*, sp. n.; Raymond, 543.

Clyde Area, Carboniferous, notes on and occ. of certain genera; Neilson, 456.

Clyde Area, Carboniferous, lists of Lamellibranchiata and Cephalopoda; Neilson, 454 & 455.

Lancashire, Carboniferous, notes on certain spp. in Manchester Museum; Jackson, 346.

Great Britain, Carboniferous, *Glyptioceras vesiculifer*, de Koninck, occ. of; **Hind, 317.**

Great Britain, Carboniferous, *Solenocheilus*, *Cyclonutilus*, *Ampheloceras*, *Ephippioceras*, *Pericyclus*, gen. & spp. n.; **Hind, 317.**

Clyde Drainage Area, Carboniferous, faunal list; **Goodchild, 256.**

Wyoming, Carboniferous, *Gastrioceras*, sp. n.; **Girty, 250.**

Idaho, Carboniferous, ? *Grammysia*, *Aviculopecten*, *Naticopsis*, spp. n.; **Girty, 250.**

Wyoming and Idaho, Carboniferous, ? *Edmondia*, *Nucula*, *Yoldia*, *Schizodus*, *Aviculopecten*, *Pleurotomaria*, spp. n.; **Girty, 250.**

The fauna of the phosphate beds of the Park City formation in Idaho, Wyoming and Utah; **Girty, 250.**

Utah, Carboniferous, *Aviculopecten*, *Astartella*, spp. n.; **Girty, 249.**

Arkansas, Carboniferous, *Solenopsis*, *Sanguinolites*, *Sphenotus*, *Edmondia*, *Cardiomorpha*, *Leda*, *Paleoneilo*, *Cypricardina*, *Conocardium*, *Caneyella*?, *Aviculopecten*, *Cypricardella*, *Euconospira*, *Bembexia*, *Patellosticum*, *Oxydiscus*, *Anomphalus*?, *Platyceras*, *Orthonychia*, *Paraparchites*, *Primitia*, *Halliella*?, *Kirkbya*, *Amphissites*, *Glyptopleura*, *Bairdia*, genn. spp. & varr. n.; **Girty, 248.**

Devonshire, Carboniferous, notes on certain Cephalopoda; **Crick in Collins, 136.**

England, Carboniferous, occ. certain spp.; **Bolton, 66.**

Nova Zemblaya, Lower Carboniferous, occ. certain spp.; **Roussanof, 563.**

Devonian.

Belgium, Silurian, list of spp.; **Malaise, 414.**

Northern Russia, Ober Devon, *Pterochaenia*, *Buchiolia*, *Paraptyx*, *Ontaria*, spp. n.; **Zamiatin, 729.**

Nova Zemblaya, Upper Devonian, occ. certain spp.; **Roussanof, 563.**

Portugal, Devonian, list of spp.; **Delgado, 177.**

Belgium, Lower Devonian, occ. certain spp.; **Maillieux, 412.**

France, Finistère, Lower Devonian, occ. certain spp.; **Collin, 135.**

Silurian.

Canada, Silurian, occ. certain spp.; **Whiteaves, 711.**

Scotland, Silurian, *Protopecten*, *Bysso-nychia*, *Ambonychia*, *Posidonomya*, *Pterinea*, *Opisthoptera*, *Pteronites*, *Leptodesma*, *Myalina*, *Gosseletia*, *Euthydesma*, *Modiolopsis*, *Modiolodon*, *Paracyclus*, *Cyrtodonta*, *Vanuxenia*, *Pararca*, *Nuculana*, *Ctenodonta*, *Palæoneilo*, *Edmondia*, *Cypricardina*, *Dexiobia*, *Goniophora*, *Grammysia*, gen. spp. n.; **Hind, 318.**

Ontario, Silurian, *Cypricardina*, *Trochonema*, *Hercynella*, *Trochoceras*, spp. n.; **Grabau, 258.**

Michigan, Silurian, *Pterinea*, *Conocardium*, *Hormotoma*, *Loronema*, *Pleurotrochus*, *Acanthonema*, *Pleuronotus*, var. & sp. n.; **Grabau, 258.**

Tennessee, Silurian, *Cyrtoceras*, *Hyo-lithus*, *Diaphorostoma*, *Platyceras*, *Pterinea*, *Rhombopteria* (*Newsomella*), subgen. & spp. n.; **Foerste, 207.**

Portugal, Silurian, list of spp.; **Delgado, 177.**

Victoria (Australia), South Yarra and Yarra Improvement Works, Silurian, list of spp.; **Chapman, 111.**

Ordovician.

Scotland, Ordovician, *Helminthochiton* sp. n.; **Reed, 546.**

Wales, Ordovician, *Cyclonema*, *Bellerophon* (*Protowarthia*), *Eccyliomphalus*, *Cyrtolites*, spp. & varr. n.; **Wade, 692.**

Belgium, Ordovician, list of spp.; **Malaise, 414.**

Portugal, Ordovician, list of spp.; **Delgado, 177.**

Cambrian.

Belgium, Cambrian, occ. *Actinodonta*; **Malaise, 413.**

Bohemia, Cambrian, *Connlaria*, *Hyo-lithus*, spp. n.; **Želizko, 731.**

III.—SYSTEMATIC INDEX.
2231

GASTROPODA.

AMPHINEURA.

Acanthochites deliciosus sp. n. S.W. Australia, THIELE Polyplacophora (Die Fauna S.W. Australiens) 1911 p. 403.

Alexandromenia gen. n. *agassizi* (genotype), *valida*, spp. n., California, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 47 133 142.

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Dendrochiton subgen. n. (*Mopalia*), BERRY Philadelphia Proc. Acad. Nat. Sci. 63 p. 487.

Dondersia californica sp. n. California HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 48 155.

Dorymenia gen. n. (*Aplacophora*) genotype, *D. acuta* sp. n. California, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 46 95.

Drepanomenia gen. n. (*Aplacophora*) *campyrella* sp. n. Hawaii, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 44 77.

Driomenia gen. n. (*Aplacophora*) *pacifica* sp. n. Japan, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 46 93.

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Pachymenia gen. n. (*Aplacophora*) *abyssorum* sp. n. California, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 45 72.

Proneomenia hawaiiensis, *insularis*, spp. n., Hawaii, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 45 82 90.

Pruvotiniidae nom. n. pro *Paramentidae*, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 41 47.

Strophomenia ophidiana, *regularis*, *farcimen*, *spinosa*, *triangularis*, *scandens*, spp. n., Japan and Hawaii, HEATH Mem. Mus. Comp. Zool. Harvard Coll. 45 pp. 46 112 116 119 122 125 106.

PROSOBRANCHIA.

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A. parcilineata Silesia, *A. callostoma*, spp. n., Pyrennees, CLESSIN Frankfurt a. M. NachrBl. D. malakozool. Ges. 43 pp. 165–166.

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A. rosana, *almo*, *oldroydae*, *Cosmia*, *montereyensis* California, *clarionensis* Mexico, *iluliukensis* Alaska, spp. n., BARTSCH Proc. U. S. Nation. Mus. 41 pp. 349 350 352 356 359–360.

A. trachisma, *californica*, spp. n., California, BARTSCH Proc. U. S. Nation. Mus. 41 pp. 339–340.

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B. (Semibittium) attenuatum boreale Vancouver I., *attenuatum*, *B. (S. latiflosum, B. (Liobittium), munium munitoide, asperum lomaense*, California, subspp. n., BARTSCH Proc. U. S. Nation. Mus. 40 pp. 395 405 406.

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(n-9186 r)

Cerithiopsidella subgen. n. (*Cerithiopsis*) type *C. cosmia*, BARTSCH Proc. U. S. Nation. Mus. 40 p. 329.

Cerithiopsina subgen. n. (*Cerithiopsis*) type *C. necropolitana*, BARTSCH Proc. U. S. Nation. Mus. 40 p. 328.

Cerithiopsis magellanica sp. n. Straits of Magellan, BARTSCH Proc. U. S. Nation. Mus. 40 p. 358.

C. gloriosa, arnoldi, antemunda, diomedea, montereyensis, spp. n., California, BARTSCH Proc. U. S. Nation. Mus. 40 pp. 353 357 359-363.

C. curtata, bicolor, spp. n., Galapagos Is., BARTSCH Proc. U. S. Nation. Mus. 40 pp. 352 357.

C. paramoea sp. n. Washington, BARTSCH Proc. U. S. Nation. Mus. 40 p. 356.

C. ara, pesa, vicola, io, movilla, spp. n., Bermuda, DALL & BARTSCH Proc. U. S. Nation. Mus. 40 pp. 281-285.

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C. stephensi sp. n. Alaska, BARTSCH Washington D.C. Smithsonian Inst. Nation. Mus. Proc. 37 pp. 399-400.

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C. (Cerithiopsina) adamsi sp. n. Panama, BARTSCH Proc. U. S. Nation. Mus. 40 p. 346.

C. (Cerithiopsis) abreojosensis, halia, aurea, spp. n., Lower California, BARTSCH Proc. U. S. Nation. Mus. 40 pp. 338 344.

C. (C.) carpenteri, berryi, cesta, oxys, spp. n., California, BARTSCH Proc. U. S. Nation. Mus. 40 pp. 334 339 341.

C. (C.) galapagensis sp. n. Galapagos Is., BARTSCH Proc. U. S. Nation. Mus. 40 p. 340.

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moguntina, *L. kinkelini*, *L. turrita*
klein mut. *elongata*, sp. var. & mut. n.,
Germany Cainozoic, JOOSS Wiesbaden
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varr. *anomala*, *oglei*, *M. sylhetensis*,
extraria, *sufflava*, *lubricata*, *garaensis*,
subangulata, *scyphus*, *evidens*, *striata*,
japvoensis, *nemothaensis*, *saltus*, *sphae-*
rica, *herbia*, *vertex*, *propinqua*, *quaesita*,
striaticostata, *dikrangensis*, *ganjaviensis*,
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chiricahuana percarinata, obsoleta, bar-
bata minima, subspp. n., Arizona,
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tatis, argelica, subspp. n., Arizona,
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ptychophorus, grandis, spp. n., Umge-
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Res. wissenschaftl. Untersuchungen d.
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IX. ARTHROPODA

(GENERAL)

ARRANGED BY

D. S H A R P

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT INDEX.. .. .	2

N.B.—For Protura vide XII. Insecta, Aptera.

I.—TITLES.

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Chloralphénol de Amann pour le montage des Arthropodes; **Langeron, 3.**

Wanderung des Iripigments im Facettenauge; **Demoll, 2.**

ETHOLOGY. 2419

Hydrotropisme chez les Arthropodes; **André, 1.**

Influence of color environments on the behavior of certain arthropods; **Pearse, 4.**

Metazoan parasitology; **Smith, 5.**

X. CRUSTACEA

ARRANGED BY

W. T. CALMAN, D.Sc.

CONTENTS

	PAGE
I. TITLES	3
II. SUBJECT-INDEX :—	
General, Economics	17
Structure	18
Physiology	18
Development	19
Ethology	20
Variation and <i>Æ</i> tiology	21
Distribution :—	
1. Geographical :—	
A. General	21
B. Land and Fresh-water	21
C. Marine	23
2. Geological	24
III. SYSTEMATIC INDEX :—	
Decapoda	25
Brachyura	25
Oxyrhyncha	26
Cyclometopa	26
Catometopa	27
Oxystomata	27
Dromiacea	27

	PAGE
Anomura	27
Galatheidea	27
Paguridea	28
Hippidea	28
Macrura	28
Nephropsidea	28
Eryonidea	29
Loricata	29
Thalassinidea	29
Caridea	29
Penaeidea	31
Stenopidea	31
Euphausiacea	32
Mysidacea	32
Syncarida	32
Stomatopoda	32
Cumacea	33
Tanaidacea	33
Isopoda	33
Asellota	33
Phreatoicidea (vacant)	
Flabellifera	34
Valvifera	35
Epicaridea	35
Oniscoidea	35
Amphipoda	35
Gammaridea	36
Hyperiidea	38
Caprellidea	38
Phyllocarida	38
Branchiopoda	38
Phyllopoda	38
Cladocera	39
Copepoda	39
Branchiura	44
Ostracoda	44
Cirripedia	45

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General Treatises.

Calman, 52 & 53.

For Medical Officers; **Alcock, 4.**

Collections and Expeditions.

British Museum Guide, fossil Crustacea; **Bather, 28.**

Percy Sladen Trust Exped. "Sealark" marine *Brachyura*; **Rathbun, 220.**

"Blake" expeditions 1877-80, *Penaeidea* and *Stenopidea*; **Edwards & Bouvier, 96.**

Monaco Expeditions; **Bouvier, 40: Chevreux, 65: Coutière, 76, 78: Hansen, 135: Koehler, 157, 158.**

"Siboga" Exped., *Penaeidae*; **Man, 177: Alpheidae (Caridea); Man, 178.**

Deutsche Tiefsee Exped. "Valdivia," *Paguridea*; **Balss, 25: Euphausiacea; Illig, 143.**

Doflein's exped. to Japan, *Paguridea*; **Balss, 25: Isopoda; Thielemann, 282: Cirripedia; Krüger, 160, 161: Rhizocephala; Häfele, 131, 132.**

Deutsch Zentral Afrika Exped., *Cladocera*; **Brehm, 47.**

Danmark Exped. til Grønlands Nordostkyst, *Entomostraca*; **Brehm, 48.**

"Pourquoi Pas?" Antarctic Exped., *Gammaridea*; **Chevreux, 64.**

Deutsche Südpolar Exped. "Gauss," *Copepoda*; **Wolfenden, 306.**

Nomenclature.

Stebbing, 259: Cladocera; Langhans, 167: Cirripedia; Pilsbry, 212.

Economics.

Lobster Fishery, Dorset; **Barnes, 27: Palinuridae, W. Africa; Gruvel, 127.**

Migration experiments with Crabs and Lobsters; **Meek, 186: Marking experiments with crabs [Cancer pagurus]; Donnison, 86.**

Lobster hatching; **Meek, 186: Élevage d'écrevisses à pattes rouges; Drouin de Bouville, 91: Incubation artificielle des œufs d'écrevisse; Paris, 203.**

Schonzeit für *Homarus*; **Farestad, 105.**

II.—SUBJECT INDEX.

GENERAL

2603

Bibliography.

Jahresbericht für 1907, *Malacostraca*; **Hennings, 136: Entomostraca; Stendell, 262: für 1909, Malacostraca u. Entomostraca; Illig & Rühle, 144.**

Bibl. of *Diaptomus* and allied genera; **Tollinger, 284.**

(N-9186 L)

Peste des écrevisses; Dubois, 95 : Krebspest in Finland; Brofeldt, 51 : Forsius, 109 : Järvi, 146.

Crustacea (chiefly *Decapoda*) as food of Halibut and other fish; T. Scott, 240.

Phyllopoden als Gelsenvertilger; Abonyi, 3 : *Apus* damaging rice fields; Walton & Kemp, 295.

STRUCTURE. 2607

General.

Structure of *Homarus*; Herrick, 137 : fossil *Syncarida*; Calman, 57 & 58 : *Anostraca*; Daday, 81 : *Leptodora*; Gerschler, 118 : *Platycopia* gen. n. of *Copepoda Calanoida*; Sars, 234 : *Ergasilidae* (*Copepoda*); Wilson, 301 : *Dolops* (*Branchiura*); Maidl, 176 : *Loricula* and other *Cirripedia* from Chalk; Withers, 303 : new *Rhizocephala*; Häfele, 131 : *Thompsonia* (*Rhizocephala*); Häfele, 132.

Anat. of males, *Scalpellum* and *Ibla* (*Cirripedia*); Stewart, 267.

Exoskeleton.

Gliederung und Gelenke der Decapoden; Klunzinger, 156.

Aeusserer Bau von *Asellus aquaticus*; Tschetwerikoff, 286.

Antennae, *Asellus*; Wege, 296.

Modified chelae of male *Cheraps* (*Nephropsidea*); Calman, 55.

Copulatory stylets of *Cambarus* and *Astacus*; Andrews, 8, 11.

Muscular System.

Position du muscle adducteur des *Scuta* dans les Cirripèdes pédonculés; Joleaud, 147.

Nervous System and Sense Organs.

Ganglienzellen der Crustaceen; Poluzyński, 217.

Sensory hairs, *Cirripedia*; Stewart, 267.

Geruchsorgane bei Galatheiden; Marcus, 181.

Facettenauge der Crustaceen; Moroff, 196 : Modifications of eyes in deep-sea *Mysidacea*; Tattersall, 277.

Circulatory and Respiratory Organs.

Circ. syst., *Palaemon* (*Caridea*); Leontowitsch, 174.

Digestive System.

Digestive gland of crawfish; Bradley, 44.

Excretory System.

Anat. und Histol. der Maxillardrüse bei Copepoden; Plenk, 215 : Maxillary gland of *Squilla*; Woodland, 309.

Reproductive organs.

Geschlechtsorgane von *Lyasmata* (*Caridea*); Spitschakoff, 256.

Spermatophores and spermatheca in *Penaeidea* and *Eryonidea*; Andrews, 10.

Special organs and tissues.

Scheitelorgan von *Limnadia lenticularis*; Abonyi, 2.

Neue Drüse *Potamobius* (*Astacus*); Skorikow & Redikorzew, 248.

Chromatophoren; Menke, 188.

Bindesubstanz von *Argulus*; Grobben, 125.

Cytology.

Numero dei cromosomi, *Artemia*; Artom, 21.

PHYSIOLOGY. 2611

Digestive gland of crawfish; Bradley, 44 : Ferments protéolytiques des Décapodes; Sellier, 243.

Agglutination of blood-corpuscles in *Gammarus*; Tait, 272 : Blood coagulation in *Ligia* and *Gammarus*; Tait, 273 : in *Gammarus*; Tait, 275 : in *Mysidacea*, *Isopoda*, *Amphipoda*, *Decapoda*; Tait, 276.

Effect of *Sacculina* on fat-metabolism of *Inachus*; Robson, 229.

Rhythmical contractility of anal musculature in *Astacus* and *Homarus*; Miller, 194.

Giftigkeit von Seewasser für *Daphnia*; Dernoscheck, 84 : Résistance au cyanure de potassium; Drzewina, 93, 94 : Action of acids and alkalies

on lobster larvae; **Bohn**, 36: Einfluss einiger Lösungen auf die Häutung und Regeneration von *Asellus*; **Hankó**, 134.

Extraits organiques des Crustacés, action sur la pression sanguine; **Gautrelet**, 117.

Geruchssinn bei Dekapoden; **Doflein**, 85: Seat of smell in crayfish; **Holmes & Homuth**, 141.

Gehörsinn von *Asellus*; **Tschetwerikoff**, 286.

Funktion der Statocysten bei den Crevetten; **Erikson**, 98.

Vergl. Physiologie des Gesichtssinnes; **Hess**, 139: Fluoreszenz an den Augen von Krebsen; **Hess**, 138: Effect of coloured light on pigment migration in eye of *Cambarus*; **Day**, 82.

Reactions to light, *Eubbranchipus*; **Holmes**, 140: Reactions of surface and subterranean isopods; **Banta**, 26.—(See also Tropisms p. 20).

Conditions thermiques de l'activité des Crustacés; **Matisse**, 184: Wärmeempfindlichkeit von Zoëa-Larven; **Schmid**, 239.

Colour change in *Ligia (Oniscoidea)*; **Tait**, 274.

Geschlechtsbestimmung bei Daphniden; **Woltereck**, 308.

Mesmerising lobsters; **Meek**, 186.

DEVELOPMENT. 2615

General.

Development of *Leptodora (Cladocera)*; **Gerschler**, 118: *Thompsonia (Rhizocephala)*; **Häfele**, 132: *Achtheres*; **Wilson**, 300: *Ergasilidae (Copepoda)*; **Wilson**, 301.

Paedogenesis, Geburt, Hautung, Dauereibildung, bei marine Cladoceren; **Kuttner**, 163.

Conditions of development of Phyllopod eggs; **Abonyi**, 1.

Oogenesis, Spermatogenesis, Fertilization, &c.

Entw. der Geschlechtsprodukte *Lysemata (Caridea)*; **Spitschakoff**, 256: Differenzierung der Keimbahnzellen bei den Copepoden; **Amma**, 6.

(N-9186 L)

Oogenese bei Harpacticiden; **Krüger**, 159: *Daphnia*; **Scharfenberg**, 235.

Spermatogenese der Ostracoden; **Schmalz**, 238.

Chromosomes in sexual and parthenogenetic forms of *Artemia*; **Artom**, 22.

Parthenogenesis.

Artemia; **Artom**, 21.

Embryology.

Ontogeny of *Homarus*; **Herrick**, 137: Early development of *Polypheumus (Cladocera)*; **Kühn**, 162.

Entw. der Mundgliedmassen (*Asellus*); **Tschetwerikoff**, 286: des Facettenauges der Crustaceen; **Moroff**, 196.

Metamorphosis, Larval Forms, &c.

Larval stages of various *Decapoda*; **Williamson**, 299: *Maia*; **Schlegel**, 236, 237: *Penaeus setiferus*; **Spanling**, 255: *Pasiphaë tarda*; **Björck**, 33: *Allocaris (Caridea)*; **Sollaud**, 251: Adriatische Stomatopoden; **Steuer**, 266: *Lophogaster (Mysidacea)*; **Tattersall**, 277: *Sarcotretes (Copepoda)*; **Jungersen**, 149.

Larval glands *Potamobius*; **Skorikow & Redikorzew**, 248.

Growth-changes in *Gammaridea*; **Sexton**, 244, 246: **Walker**, 293.

Post-larval stages of *Scalpellum (Cirripedia)*; **Stewart**, 267.

Moulting and rate of growth of *Homarus*; **Herrick**, 137: Moulting of *Homarus*; **Meek**, 186.

Rate of growth of *Cirripedia*; **Annandale**, 14.

Generation Cycles.

Lyncodaphniden und Chydoriden; **Weigold**, 297: *Daphnia*; **Scharfenberg**, 235.

Fortpflanzungsverhältnisse bei Daphniden; **Papanicolau**, 202.

Regeneration.

In *Homarus*; **Herrick**, 137: von *Asellus*; **Hankó**, 133, 134: Antennae, *Asellus*; **Wege**, 296.

Differentiation of tissues in regenerating limbs; **Emmel**, 97.

Reversal of asymmetry in regenerating chelae of *Alpheidae*; **Stockard**, 269.

Hermaphroditism.

Herm. bei *Lysmata* (*Caridea*); **Spitschakoff**, 256.

ETHOLOGY.

2619

General.

Habits, etc., of Crustacea, general account; **Calman**, 52: *Maia* (*Oxyrhyncha*); **Vallentin**, 288: of *Lobster*; **Barnes**, 27: **Herrick**, 137: *Penaeus setiferus*; **Spaulding**, 255: marine Isopoda of North Sea; **Zirwas**, 312: *Leptodora* (*Cladocera*); **Gerschler**, 118.

Burrowing, respiration, food, stridulation, of *Thalassina*; **Pearse**, 207.

Croissance et mort de balanes; **Topse**, 285.

Tropisms.

Phototaxis bei marinen Crustaceen; **Franz**, 111. (See also Physiology p. 19.)

Phenology, Migrations.

Lyncodaphniden und Chydoriden; **Weigold**, 297.

Periodische Bewegungen und ihr Zusammenhang mit Licht und Stoffwechsel; **Menke**, 188.

Diurnal migrations of *Calanus finmarchicus*; **Esterly**, 102: Vertical migrations, *Mysis mixta*; **Otterström**, 200: of *Eucalanus elongatus*; **Esterly**, 100.

Breeding Habits, etc.

Reproduction of *Homarus*; **Herrick**, 137: Mating habits of *Cyclometopa*; **Chidester**, 69: Conjugation in *Cambarus*; **Andrews**, 9: Function of copulatory stylets in *Cambarus* and *Astacus*; **Andrews**, 8, 11: Begattung bei *Asellus*; **Tschetwerikoff**, 286.

Disproportion of sexes in *Nephrops*; **M'Intosh**, 175.

Colour differences in sexes of *Porcellana* (*Galatheidea*); **Andrews**, 7.

Habitats.

Habitat der Caprelliden im Schwarzen Meere; **Tichij**, 283: *Cladocera*; **Langhans**, 167: Vorkommen von *Balanus* spp. im Murman-Meer; **Maurodiadi**, 185.

Freshwater and Marine Crustacea in River Bure, Norfolk; **Gurney**, 130: Brackish water Crustacea; **Vanhöffen**, 290.

Rhizocephala in fresh water; **Annan-dale**, 13.

Plankton, marine; **Apstein**, 19: **Farran**, 107: **Scott**, 241: **Tesch**, 289: *Isopoda*; **Tattersall**, 278: *Cladocera*; **Apstein**, 17.

Plankton, freshwater; **Delachaux**, 83.

Subterranean *Gammaridea*; **Methuen**, 191: **Stout**, 270: *Asellota*; **Stafford**, 257: *Flabellifera*; **Pujiula**, 219.

Exotic *Ostracoda* and *Amphipoda* in Botanic Garden, Basel; **Menzel**, 189.

Dispersal of marine Crustacea by ships; **Chilton**, 70.

Artemia (*Branchiopoda*) bred from "Tidman's Sea Salt"; **Calman** Proc. Zool. Soc. 1911 p. 986.

Parasitism, Commensalism, etc.

Assumption of parasitic habit in *Achtheres* (*Copepoda*); **Wilson**, 300.

Effect of *Sacculina* on fat-metabolism of *Inachus*; **Robson**, 229.

On Fish—*Isopoda*; **Richardson**, 224, 226: *Copepoda*; **Baudouin**, 30, 31: **Baumann**, 32: **Wilson**, 301, 302: Mode de fixation de *Gnathia*; **Boutan**, 38: Fixation du *Lernæenicus* sur l'œil de la sardine; **Baudouin**, 29.

On *Tunicata*—*Copepoda*; **Brément**, 49: **Chatton & Brément**, 63.

On *Mollusca*—*Caridea*; **Pesta**, 209.

On Echinoderms—*Cirripedia*; **Fisher**, 108a.

Triple association, fish (*Scopelus*) Copepod (*Sarcotretes*) and hydroid (*Ichthyocodium*); **Jungersen**, 148, 149.

On Crustacea—*Epicaridea*; **Koehler**, 157: *Rhizocephala*; **Häfele**, 131, 132: **Annan-dale**, 13.

Parasiten von *Calanus*; **Apstein**, 18.

Protozoan parasites of *Crustacea*; **Cépède**, 60: **Chatton**, 62: **Coutière**, 77: **Grandori**, 123: **Léger & Duboscq**, 171a: **Mercier**, 190: **Sollaud**, 251.

Symbiosis of *Paguridae*; **Fieberg**, 108: of *Dromia* and sponge; **Poli-manti**, 216.

Epizoic hydroid on *Xanthias* (*Cyclo-metopa*); **Calman**, 56.

Zusammenleben von *Balanus balanoides* mit Mollusken; **Maurodiadi**, 185.

Defence and Protection, Colour, etc.

Autotomy, *Decapoda*; **Drzewina**, 92: *Homarus*; **Herrick**, 137.

Color of adult *Homarus*; **Herrick**, 137: Colour-changes in *Cambarus*; **Pearse**, 204.

Behaviour in coloured environments, *Cambarus* (*Nephropsidea*) and *Libinia* (*Oxyrhyncha*); **Pearse**, 204.

Masking in *Libinia* (*Oxyrhyncha*); **Pearse**, 204.

Verhalten niederer Krustazeen gegenüber Bakterien; **Hörhammer**, 142.

VARIATION AND ÆTIOLOGY. 2623

Variation.

Remarkable cases of var. in *Euphausiacea*; **Hansen**, 135.

Temporalvar. zweier Daphnien; **Min-kiewicz**, 195: Saisonpolymorphismus einiger Planktoncladoceren; **Thall-witz**, 281.

Polymorphism in *Jassa* (*Gammari-dea*); **Sexton**, 246: **Walker**, 293: Dimorphism of *Gnathia*; **Boutan**, 38.

Var. in number of genital apertures in *Nephrops*; **M'Intosh**, 175.

Verlängerung der Schale bei *Balanus*-Arten in Abhängigkeit von äusseren Bedingungen; **Maurodiadi**, 185.

Ein roter Hummer; **Laackmann**, 164.

Mutations évolutives, *Atyidae*; **Bou-vier**, 41.

Var. in number of chromosomes, *Artemia*; **Artom**, 21.

Teratology.

Abnormal lobster cheliped; **Cole**, 75: Monstrosities in *Homarus*; **Her-rick**, 137.

Phylogeny.

Phyl. of *Cumacea*; **Calman**, 54: *Decapoda*; **Edwards & Bouvier**, 96: *Palaeomonidae* (*Caridea*); **Sollaud**, 253.

Heredity.

Transmutation und Präinduktion bei *Daphnia*; **Woltereck**, 307.

DISTRIBUTION. 2627

1. GEOGRAPHICAL.

A. GENERAL.

Distrib. of spp. of *Leptocheirus* (*Gammari-dea*) entering fresh water; **Sexton**, 244.

Estuarine—Kamerun, *Callinassa*; **Vanhöffen**, 289: Frisches Haff, *Gam-maridea* sp. n.; **Vanhöffen**, 290.

Distribution of *Diaptomus* and allied genera of *Copepoda* in fresh and brackish water; **Tollinger**, 284.

B. LAND AND FRESHWATER (INCLUDING SALT LAKES).

Distrib. of *Bosmina* (*Gladocera*); **Rühe**, 232.

Europe and Mediterranean Islands. d

Russland, Nowgorodische Gouv., *Gladocera* sp. & varr. n.; **Werest-schagin**, 298.

Finland, *Cyclops* (*Copepoda*); **Martens**, 183.

Deutschland, *Diaptomus*; **Douwe**, 89: Verbr., *Chydoridae*; **Keilhack**, 151: Phyllopoda; **Lauppe**, 169: *Gladocera*; **Weigold**, 297: Norddeut-schland, *Gladocera*; **Keilhack**, 150: Bayern, *Copepoda* sp. n.; **Douwe**, 90: Celle, *Chirocephalus*; **Klugkist**, 155: Laacher See, *Gladocera*, *Cope-poda*, *Ostracoda*; **Schauss** Bonn Sitz-Ber. nathist. Ver. 1910 pp. 42–44: Südl. Schwarzwald, *Chirocephalus*; **Graeter**, 122.

Ireland, *Oniscoidea*, distrib. of all spp.; Pack-Beresford & Foster, 201: *Oniscoidea*, records; Stephens, 263: Foster Irish Nat. 20 p. 95: exotic *Oniscoidea*; Foster, 110.

France, *Diaptomus* (Copepoda); Cépède, 60: Nantoin, Isère, *Cladocera*; Eynard, 103: Loire-Inférieure, *Crustacea*; Labbé, 165.

Mallorca, *Flabellifera* sp. n.; Pujiula, 219.

Italy, *Oniscoidea* sp. n.; Arcangeli, 20.

Switzerland, *Isopoda*, revision; Carl, 59: *Cladocera*, *Ostracoda*, *Copepoda*; Delachaux, 83: *Branchiopoda*; Stिंगelin, 268: Basel, exotic *Ostracoda* and *Gammaridea* sp. n. in Botanic Garden; Menzel, 189: Zürichsee, *Copepoda* (paras.) sp. n.; Baumann, 32.

Kärnten und Tirol, *Copepoda*, *Cladocera*; Pesta, 211: Salzkammergut, *Cladocera*; Langhans, 168: Nord-Böhmen, *Cladocera*; Langhans, 167.

Ungarn, *Limnadia lenticularis*; Abonyi, 2.

Asia and Malay Archipelago. e

Transkaukasien, *Potamobius* sp. n.; Skorikov, 247.

Ostasien, *Isopoda*; Thielemann, 282.

Pekin, *Caridea* sp. n.; Sollaud, 251.

Ostindien, *Cladocera* sp. n.; Daday, 79.

India, *Oniscoidea* sp. n.; Stebbing, 261: Kashmir and United Provinces, *Apus*; Walton & Kemp, 295.

Andaman Ids., *Rhizocephala* sp. n.; Annandale, 13.

Kleinasien, *Copepoda*; Brehm, 46.

Africa and Madagascar. f

Algérie et Tunisie, *Gammarina*; Chevreux, 67.

Egypt and Soudan, *Cladocera*, *Copepoda*; Gurney, 129.

Central Africa, *Cladocera* spp. n.; Brehm, 47.

West Africa, *Palaemon* (*Eupalaemon*) key to spp.; Man, 180.

Lac Tehad, *Palaemon niloticus*; Sollaud & Tilho, 254.

Congo River, *Caridea* sp. n.; Man, 179.

S. Africa, *Cladocera*, *Ostracoda*; Brehm, 46: Transvaal, *Gammaridea* sp. n.; Methuen, 191 & 193: *Cladocera* var. n.; Methuen, 192.

North America. g

N. America, *Cyclops*, revision, sp. n.; Marsh, 182: *Ergasilidae* (*Copepoda*) spp. n.; Wilson, 301: *Copepoda* sp. n.; Wilson, 302.

New England, *Cladocera*; Doolittle, 87: Michigan, *Cambarus* spp.; Pearse, 205: Michigan, records; Pearse Rep. Mich. Acad. Sci. Lansing 13 p. 130: Wisconsin, *Anostraca* sp. n.; Holmes, 140: Alabama, *Asellota* sp. n.; Stafford, 257: *Gammaridea* sp. n.; Stout, 270.

Vera Cruz, Mexico, *Oniscoidea* sp. n., *Gammaridea* sp. n., *Nephropsidea* sp. n., *Cyclometopa* sp. n.; Pearse, 206.

Central and South America and West Indies. h

Brazil, *Ostracoda* sp. n.; Daday 80: *Copepoda* spp. n.; Douwe, 88: *Pseudopalaemon* (*Caridea*) sp. n.; Sollaud, 252: Haut Parana, *Flabellifera* sp. n.; Richardson, 226.

Monte Video, *Palaemonidae* (*Caridea*) sp. n.; Sollaud, 250.

Southern Patagonia, *Copepoda*, *Ostracoda*, *Cladocera*, *Phyllopoda* sp. n., *Gammaridea* sp. n.; Ortmann, 199.

Australasia. i

New Guinea, *Cheraps* (*Nephropsidea*); Calman, 55: New Guinea, Aru and Kei Ids., *Caridea* spp. n., *Nephropsidea* spp. n., *Cyclometopa* spp. n.; Roux, 231.

Australia, *Phyllopoda* spp. n.; Wolf, 305: Victoria, *Copepoda* spp. n.; Searle, 242.

Kermadec Ids., *Amphipoda*, *Oniscoidea* sp. n., *Ostracoda*, *Cladocera*; Chilton, 72.

Arctic.

N.E. Greenland, *Phyllopora*, *Cladocera*, *Copepoda* sp. n., *Ostracoda* sp. n.; Brehm, 48.

Antarctic.

Vacant.

C. MARINE.

(The arrangement is based on that of Borradaile, Bibliography of the Marine Fauna, Challenger Society, 1908.)

General.

Distrib. of *Palinuridae*; Gruvel, 126, 128: of *Euphausiacea*, spp. n.; Hansen, 135: of spp. of *Leptocheirus* (*Gammaridea*); Sexton, 244: records of *Cirripedia*; Annandale, 15.

Nordisches Plankton, *Cladocera*; Apstein, 17: Die nordischen Isopoden; Tattersall, 278.

Atlantic Ocean.

Copepoda spp. n.; Wolfenden, 306.

North Atlantic.

Decapoda; Bouvier, 40: *Gammaridea* spp. n., *Hyperiidea*; Chevreux, 65: *Caridea* spp. n.; Coutière, 76: *Caridea* sp. n.; Coutière, 78: *Copepoda* sp. n. (paras.); Jungersen, 148, 149: *Epicaridea* spp. n.; Koehler, 157: *Valvifera* spp. n.; Koehler, 158.

North East Atlantic Slope, *Euphausiacea*, *Mysidacea* spp. n.; Tattersall, 277.

Off S.W. Ireland, 160 fath., *Paromola Cuvieri* (*Dromiacea*); Calman Irish Nat. 20 p. 75.

Irish seas, *Scalpellum* (*Cirripedia*) sp. n.; Annandale, 12: Irish Sea, *Diastylis lucifera* (*Cumacea*); Massy Irish Nat. 20 p. 77.

St. Ives Bay, Cornwall, *Crustacea* lists; Vallentin, 287.

Clyde area, *Copepoda* sp. n.; Norman, 198.

North Sea Plankton, *Ostracoda*; Apstein, 19: *Copepoda*; Farran, 107: Scott, 241: *Amphipoda*; Tesch, 280: *Isopoda* sp. n.; Zirwas, 312: Schizo-

poden der südlichen Nordsee; Tesch, 279.

Baltic, *Mysis oculata* var. *relicta*; Zimmer, 311.

Norway, *Copepoda* spp. n.; Sars, 233: *Copepoda* sp. n.; Sars, 234.

Bay of Biscay, *Gammaridea* sp. n.; Sexton, 245: *Amphipoda*; Sexton, 246.

Madeira, *Ostracoda* spp. n.; Brady, 45.

Western North Atlantic, Gulf of Mexico, Caribbean Sea, *Penaeidea* sp. n., *Stenopidea*; Edwards & Bouvier, 96.

North America, *Ergasilidae* (*Copepoda*) spp. n.; Wilson, 301: *Copepoda* spp. n.; Wilson, 302: Atlantic coast southern U.S., *Flabellifera* sp. n.; Richardson, 224: Bermuda, *Copepoda* spp. n.; Esterly, 101.

Mediterranean.

Decapoda; Bouvier, 40: *Gammarina* spp. n.; Chevreux, 67: *Valvifera* sp. n.; Koehler, 158: Banyuls, *Copepoda* sp. n.; Chatton et Brément, 63: Bay of Naples, *Crustacea* records; Walther, 294: Algérie et Tunisie, *Gammaridea* sp. n.; Chevreux, 66.

Adriatic, *Neptunus sanguinolentus* and *Gonoplax rhomboides* var. *angulata*; Babić, 23: *Hyperiidea* sp. n.; Steuer, 264: *Hyperiidea*; Steuer, 265: Stomatopoden; Steuer, 266.

Black Sea, *Caprellidae*; Tichij, 283.

Tropical Atlantic.

(See also under N. Atlantic.)

West Africa, *Paguridae* sp. n.; Balss, 25: *Palinuridae*; Gruvel, 127.

Florida, Jamaica, *Cirripedia* spp. n.; Pilsbry, 214.

Louisiana, *Penaeidea* and *Caridea*; Spaulding, 255.

West Indies, *Cumacea* spp. n.; Calman, 54: *Ergasilidae* (*Copepoda*) spp. n.; Wilson, 301.

Off Rio de la Plata, *Valvifera* sp. n.; Richardson, 223.

Argentine, *Cirripedia*; Lahille, 166: *Blepharipoda* (*Hippidea*); Porter, 218.

Southern Ocean.

Southern Patagonia, *Cirripedia*, *Isopoda*, *Anomura*, *Brachyura*; Ortmann, 199.

S. Sandwich Ids., *Valvifera*; Bouvier, 42: *Gammaridea* spp. n.; Chevreux, 68: *Flabellifera* spp. n.; Richardson, 227.

Kerguelen, *Decapoda*, *Isopoda*; Bouvier, 43.

Southern Australia, *Sphaeromidae* (*Flabellifera*) spp. n.; Baker, 24.

New Zealand, *Scalpellum*, (*Cirripedia*) sp. n.; Annandale, 16: *Cumacea* spp. n.; Calman, 54: *Cymodoce* introduced; Chilton, 70: *Stomatopoda*, revision; Chilton, 71: *Brachyura*, *Anomura* nom. n., *Macrura*, *Stomatopoda*, *Amphipoda*, *Isopoda*, *Cirripedia*; Chilton, 73: *Caridea* sp. n.; Kemp, 152.

North Pacific.

Japan, *Stomatopoda* spp. n.; Fukuda, 115, 116: *Rhizocephala* sp. n.; Häfele, 131: *Cirripedia*; Krüger, 160: *Paguridea* spp. n.; Balss, 25: Japan and Korea, *Cumacea* spp. n.; Calman, 54: Japan and Bering sea, *Cirripedia* spp. n.; Pilsbry, 213.

Eastern Asia, *Cirripedia* spp. n.; Krüger, 161: *Isopoda* spp. n.; Thielemann, 282.

Northwest Pacific, *Asellota* sp. n.; Richardson, 225.

North America, *Ergasilidae* (*Copepoda*); Wilson, 301: San Diego region, *Copepoda* spp. n.; Esterly, 99: California, *Dendrogaster* (*Cirripedia*) sp. n.; Fisher, 108a.

Eastern Pacific.

Peru, *Copepoda* sp. n.; Wilson, 302.

Indo-Pacific.

Alpheidae (*Caridea*) lists of all spp. & varr., 3 varr. n.; Man, 178.

Suez, *Cumacea* sp. n.; Calman, 54: Sudanese Red Sea, *Anomura*; Riddell, 228.

Persian Gulf, *Copepoda* sp. n.; Pesta, 210.

Indian Ocean, *Copepoda*; Wolfenden, 306: *Paguridae* spp. n.; Balss, 25: Western Indian Ocean, *Brachyura* spp. n.; Rathbun, 220.

Mauritius, *Decapoda*; Bouvier, 39.

Indian Seas, *Stomatopoda* spp. n.; Kemp, 153: India, *Flabellifera* sp. n.; Stebbing, 261: India and Ceylon, *Cumacea* spp. n.; Calman, 54: Ceylon, *Alpheidae* (*Caridea*); Pearson, 208.

Andaman Ids., *Caridea* sp. n.; Kemp, 152.

Strait of Malacca, *Thalassinidea* sp. n.; Man, 179.

Malay Archipelago, *Penaeidae* spp. n.; Man, 177.

Christmas Island (Indian Ocean), *Cyclometopa*; Calman, 56: *Copepoda* spp. n.; Farran, 106.

Gulf of Siam, *Cumacea* spp. n.; Calman, 54.

China Sea, *Cirripedia* spp. n.; Annandale, 15.

Kermadec Ids., *Decapoda*, *Thalassinidea* sp. n., *Euphausiacea*, *Amphipoda*, *Isopoda*, *Cirripedia*; Chilton, 72.

Samoa, *Caridea* sp. n.; Pesta, 209.

Arctic.

Murman-Meer, *Cirripedia*; Maurodiadi, 185.

Kara Sea, *Decapoda*, *Euphausiacea*, *Mysidacea*, *Cumacea*, *Tanaidacea*, *Isopoda* sp. n., *Amphipoda* spp. n.; Stappers, 258.

Antarctic.

Gammaridea new genera, no spp.; Chevreux, 64: *Copepoda* spp. n.; Wolfenden, 306.

2. GEOLOGICAL.

General.

Fossil Crustacea in British Museum Guide; Bather, 28.

List of fossil spp. of *Callianassa*; Böhm, 35.

„Horizont der *Ostrea ameghinovi*“, Argentina, *Callianassa* sp. n.; Böhm, 35.

Ordovician.

Montgomeryshire, *Ostracoda* sp. n.; Wade, 291.

N. America, *Ostracoda*; Raymond, 221.

Silurian.

Norway, Kristiania area, *Phyllocarida*; Kiær, 154.

Michigan, *Ostracoda* spp. n.; Grabau, 121.

Devonian.

Eastern N. America, *Ostracoda*; Clarke, 74.

Middle Devonian, Wisconsin, *Ostracoda*, *Phyllocarida*; Cleland, 74a.

Carboniferous.

Bristol, *Phyllopoda* and *Ostracoda*; Bolton, 37.

Arkansas, *Ostracoda* spp. n.; Girty, 120.

Unter-carbon-Kalkstein von Chabarny, *Crustacea*; Janischewsky, 145.

Moorefield shale, Arkansas, *Ostracoda* sp. n.; Girty, 119.

Coal Measures, England, *Synsarcida* sp. n.; Calman, 57, 58; Derbyshire, *Phyllopoda* sp. n.; Moysey, 197.

Triassic.

Ungarn, *Estheria* sp. n.; Frech, 112; *Ostracoda* spp. n.; Méhes, 187.

Jurassic.

Tithonian, Stramberg, *Galatheidia* spp. n., *Dromiacea* spp. n.; Blaschke, 34.

Inferior Oolite, Gloucester, *Pollicipes* (*Cirripedia*); Withers, 304.

Cretaceous.

Lower Greensand, Isle of Wight, *Loricata* spp. n.; Reed, 222.

Cenomanian, Bohemia, *Crustacea*, list with figs.; Frič, 113.

Senonian, *Oxynaspis* (*Cirripedia*); Joleaud, 147.

Upper Senonian, Salisbury, Wiltshire, *Cirripedia* spp. n.; Withers, 303.

Tertiary.

Italy, *Brachyura*; Fabiani, 104.

Japan, *Brachyura* spp. n.; Yokoyama, 310.

Faluns de Touraine, *Ostracoda*; Lecointre, 170; *Cirripedia*; Lecointre, 171.

Middle Eocene, Cyrenaica, *Ostracoda* sp. n.; Chapman, 61.

Miocene, Eggenburg, Austria, *Cirripedia* sp. n.; Alessandri, 5.

Pliocene, Italy, *Cyclometopa*; Fucini, 114.

III.—SYSTEMATIC. 2631**DECAPODA.**

Gliederung u. Gelenke, KLUNZINGER Verh. D. zool. Ges. Leipzig 20-21 (1910-11) 1911 pp. 125-141 figs.—Autotomy, DRZEWINA Arcachon Bull. Soc. Sci. Station Zool. 12 1909 pp. 1-15.—Geruchssinn, DOFLEIN Biol. Centralbl. Leipzig 31 pp. 706-707.—blood-coagulation, TAIT Plymouth J. Mar. Biol. Ass. 9 p. 192.—ferments protéolytiques, SELLIER Bul. stat. biol. Arcachon 13 pp. 69-209 figs.—Food of Halibut and other fish, T. SCOTT Glasgow Rep. Fish. Board 28 pt. iii p. 34.

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Brachyura.

Indian Ocean, notes on many spp., only figured spp. noted further below, RATHBUN London Trans. Linn. Soc. Zool. 14 pp. 191-261.—Southern Patagonia, ORTMANN Rep. Princeton Univ. Exp. Patagonia 3 p. 660.—New Zealand, notes on spp., CHILTON Rec. Canterbury Mus. 1 pp. 288-296.

OXYRHYNCHA.

Achaeus brevifalcatus p. 244, *inimicus* p. 246, with figs., *spp. n.*, Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Halimus inermis *sp. n.* p. 250 fig., *borradailei* p. 251 fig., *uncifer* p. 252 fig., Indian Ocean, RATHBUN t.c.

Hyas areneus [*araneus*]. larval stages, WILLIAMSON Fisheries Scotland Sci. Invest. 1909 i p. 13 figs.

Inachus mauritanicus effect of *Sacculina* on fat-metabolism, ROBSON Q. J. Microsc. Sci. 57 p. 267 figs.

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Macropodia formosa *sp. n.* Indian Ocean, RATHBUN London Trans. Linn. Soc. zool. 14 p. 242 fig.

Maia squinado habits, VALLENTIN Truro J. R. Inst. Cornwall 18 p. 136.—larval stages, SCHLEGEL Paris C. R. Acad. sci. 153 pp. 480–482.—zoëa, anatomy, SCHLEGEL Arch. Zool. Paris ser. 5 8 Notes pp. xxix–xl figs.

Micippoides angustifrons, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 256 fig.

Naxioides spinigera, RATHBUN t.c. p. 253 fig.

Paramithrax longipes p. 289 fig., notes on other spp., CHILTON Rec. Canterbury Mus. 1.

Parthenope (*Pseudolambrus*) *plana* *sp. n.* p. 257 fig., *erosa* p. 258 fig., Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Pseudocollodes *gen. n.* near *Collodes* p. 247, *complectens* *sp. n.* Indian Ocean p. 248 fig., RATHBUN t.c.

CYCLOMETOPA.

Mating habits, CHIDESTER Biol. Bull. 21 pp. 235–248.

Actaea tessellata p. 217, *obesa* p. 218, *acies* *sp. n.* p. 219, *suffuscula* *sp. n.* p. 220, *hellerii* p. 221, *boletaria* *sp. n.* p. 221, *polyacantha* p. 222, *banareias* *sp. n.* p. 223, with figs., Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Actumnus setifer subsp. *n. amiran-tensis* p. 231, *simplex* *sp. n.* p. 232,

laevigatus *sp. n.* p. 233, with figs., Indian Ocean, RATHBUN t.c.

Atergatopsis signata, RATHBUN t.c. p. 214 fig.

Callinectes alexandri, RATHBUN t.c. p. 206 fig.

[*Cancer pagurus*] marking experiments, DONNISON Eastern Sea Fisheries Inspector's Report p. 18.—migration experiments, MEEK Northumberland Sea Fisheries Comm. Rep. Sci. Invest 1910–1911 p. 15.—*C. pagurus* larval stages, WILLIAMSON Fisheries Scotland Sci. Invest. 1909 i p. 17 figs.

Caphyra hemisphaerica *sp. n.* Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 204 fig.

Carcinus maenas zoëa, WILLIAMSON Fisheries Scotland Sci. Invest. 1909 i p. 13 fig.

Carpilodes sayademalhensis *sp. n.* Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 211 fig.

Chlorodopsis melanospinis *sp. n.* Indian Ocean, RATHBUN t.c. p. 226 fig.

Dacryopilumnus eremita, RATHBUN t.c. p. 228 figs.

†*Eriphia cocchii*, FUCINI Ann. Univ. Toscane Pisa 30 Sci. nat. 5 pp. 1 pl.

Euxanthus rugosus, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 215 fig.

Gardineria *gen. n.* (sect. *Hyperolissa* of *Xanthidae*) *canora* *sp. n.* Indian Ocean, RATHBUN t.c. p. 236 figs.

Leptodius cavipes, cristatus, RATHBUN t.c. p. 216 figs.

Liomera granosimana, RATHBUN t.c. p. 213 fig.

Lioxantho latifrons *sp. n.* Indian Ocean, RATHBUN t.c. p. 213 figs.

Maldivia gardineri *sp. n.* Indian Ocean, RATHBUN t.c. p. 233 figs.

Medaesus haswelli ref. to *Xanthias*, CALMAN Ann. Mag. Nat. Hist. ser. 8 5 p. 547.

Neptunus sanguinolentus Adriatic, BABIĆ Zagreb Rad Jugoslav. Ak. 183 p. 235 figs.—See also *Portunus*.

Pilumnus orbitospinis p. 229, *turgidulus* p. 230, with figs., *spp. n.*, Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Platypodia anaglypta, RATHBUN t.c. p. 214 fig.

Portunus (Achelous) granulatus, orbosinus sp. n., Indian Ocean, RATHBUN t.c. p. 205 figs.—*P. holsatus, puber, depurator*, larval stages, WILLIAMSON Fisheries Scotland Sci. Invest. 1909 i p. 4 figs.

Potamon (Geotelphusa) aruanus ARU Ids. p. 91, *wichmanni* p. 99, *beauforti* p. 101, (*Peritelphusa*) *festivus* p. 104 New-Guinea, spp. n., ROUX Leiden Notes Mus. Jentink 33.

Thalamita margaritimana sp. n. p. 208 fig., *exetastica* subsp. n. *macrospinifera* p. 209, Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Trichodactylus constrictus sp., n. Mexico, PEARSE Rep. Mich. Acad. Sci. 13 p. 111 figs.

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†*Xanthilites pentagonalis* sp. n. Tertiary, Japan, YOKOYAMA Tokyo J. Coll. Sci. 27 20 p. 13 fig.

CATOMETOPA.

Gonoplax rhomboides var. *angulata* Adriatic, BABIĆ Zagreb Rad Jugoslav. Ak. 183 p. 235.

Manella gardineri sp. n. Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 240 fig.

Palicus jukesii, whitei, RATHBUN t.c. p. 240 figs.

Pilumnoplax acanthomerus sp. n. Indian Ocean, RATHBUN t.c. p. 237 fig.

Typhlocarcinops piroculata sp. n. Indian Ocean, RATHBUN t.c. p. 239 figs.

OXYSTOMATA.

Culappa bicornis p. 197 fig., *alata* sp. n. p. 198 fig., Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

Heteronucia ingens sp. n. Indian Ocean, RATHBUN t.c. p. 199 fig.

†*Ilia (?) Valldellae* Tertiary Italy, FABIANI Roma Mem. Soc. XL ser. 3 15 p. 211 fig.

Leucosides jecusculum, angulata, spp. n., Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 202 figs.

Mursia spinimanus, RATHBUN t.c. p. 198 fig.

Nursilia dentata, RATHBUN t.c. p. 203 fig.

Oreophorus reticulatus, RATHBUN t.c. p. 199 fig.

†*Præebalia* gen. n. near *Ebalia*, *extensiva* sp. n. Indian Ocean, RATHBUN t.c. p. 200 fig.

DROMIACEA.

Cryptodromia ornata sp. n. Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14 p. 195 fig.

Dromia vulgaris habits, POLIMANTI Zool. Jahrb. Jena Abt. f. allg. Zool. 30 pp. 359–376 figs.

Dynomene pugnatrix subsp. n. *brevimana* p. 196, *spinosa* sp. n. p. 196 fig., Indian Ocean, RATHBUN London Trans. Linn. Soc. Zool. 14.

†*Homolopsis japonicus* sp. n. Tertiary Japan, YOKOYAMA Tokyo J. Coll. Sci. 27 20 p. 12 fig.

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Anomura.

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GALATHEIDEA.

Geruchsorgane, MARCUS Zs. wiss. Zool. Leipzig 97 pp. 511–545 2 Taf.

Galathea humilis, RIDDELL London J. Linn. Soc. Zool. **31** p. 262.—*G. dispersa* protozoëa, WILLIAMSON Fisheries Scotland Sci. Invest. **1909** i p. 17 fig.

†*Galathea substriata, eminens*, spp. n., Tithon, Stramberg, Mähren, BLASCHKE Wien Ann. NatHist. Hofmus. **25** p. 149 figs.

Porcellana sayana colour, ANDREWS Zool. Anz. **37** p. 401 figs.

PAGURIDEA.

Cestopagurus coutieri female, RIDDELL London J. Linn. Soc. Zool. **31** p. 261.

Eupagurus microps Indik (O-Afr.) p. 5 fig., *alcocki* W.-Africa p. 6 figs., *Ortmanni* Japan p. 7, spp. n. BALSS Zool. Anz. **38**.—*E. stewarti* p. 298 fig., *norae* nom. n. for *edwardsii* Filhol non Dana p. 299, notes on other spp., CHILTON Rec. Canterbury Mus. **1**.—*E. bernhardus* zoëa, WILLIAMSON Fisheries Scotland Sci. Invest. **1909** i p. 16 fig.

Paguridae symbiosis, FIEBERG Aus d. Natur Leipzig **7** pp. 210-219.

Paralomis japonica, dofleini, spp. n., Japan, BALSS Zool. Anz. **38** p. 8 figs.

Parapagurus spinimanus p. 1 fig., *valdiviae* p. 2 fig., *chuni* p. 3, *brevimanus* p. 4 fig., spp. n., *P. arcuatus* var. n. *trispinosa* p. 3, Indik, BALSS t.c.

HIPPIDEA.

Blepharipoda occidentalis Argentine, PORTER Bul. Muséum Paris **1911** p. 17.

Macrura.

New Zealand, notes on spp., CHILTON Rec. Canterbury Mus. **1** pp. 303-306.

Funktion der Statocysten bei den Crevetten, ERIKSON Varšava Prot. Obšč. jest. **22** 3-4 pp. 90-113.

NEPHROPSIDEA.

Anal musculature, MILLER J. Physiol. Cambridge **40** pp. 431-444 figs.

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Astaconephrops genotype ref. to *Cheraps*, ROUX Zool. Anz. **37** pp. 104-106.

Astacus copulatory stylets, ANDREWS Biol. Bull. **18** pp. 79-97 figs.—Krebs, pest, FORSIUS Helsingfors Medd. Soc. Fauna et Fl. Fenn. **37** pp. 114-115: JÄRVI Helsingfors Fisk. Tidskr. Finl. **20** pp. 8-9: BROFELDT t.c. pp. 223-230.—peste, DUBOIS Paris C. R. Acad. Sci. **152** p. 471.—incubation artificielle des œufs, PARIS Paris Bul. soc. nat. acclim. **58** pp. 56-58 fig.—élevage, DROUIN DE BOUVILLE Paris C. R. soc. biol. **69** pp. 646-651.—See also *Potamobius*.

Astacus gammarus nomenclature, STEBBING Nature **85** pp. 43-44.—See also *Homarus*.

Cambarus digestive gland, BRADLEY J. Biol. Chem. Baltimore Md. **4** 1908 pl. xxxvi.—pigment migration in eye, DAY Cambridge Mass. Bull. Mus. Comp. Zool. **53** pp. 305-343 figs.—copulatory stylets, ANDREWS Biol. Bull. **18** pp. 79-97 figs.—*C. spp.* Michigan, PEARSE Michigan Geological and Biological Survey Publication **1** pp. 9-22 figs.—*C. affinis* male appendages, ANDREWS J. Morph. Philadelphia **22** pp. 239-293 figs.—*C. affinis* conjugation, ANDREWS J. Exp. Zool. **9** pp. 235-264 figs.—*C. propinquus* colour reactions, PEARSE J. Animal Behavior **1** p. 80 figs.—*C. ruthveni* sp. n. Mexico, PEARSE Rep. Mich. Acad. Sci. **13** p. 110 fig.

Cheraps aruanus sp. n. Aru Ids. p. 88 figs., *lorentzi* sp. n. New-Guinea p. 97 figs., ROUX Leiden Notes Mus. Jentink **33**.—*C. quadricarinatus* and allied spp., CALMAN Ann. Mag. Nat. Hist. ser. **8** 8 p. 366.—See also *Astaconephrops*.

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Homarus Schonzeit, FARESTAD Bergen Norsk Fisket. **30** pp. 153-155.—Red specimen, LAACKMANN Wochenschr. Aquarienkunde **8** pp. 392 & 406.—Larvae, action of acids and alkalies, BOHN C. R. Soc. Biol. **71** p. 587.—*H. americanus* abnormal cheliped, COLE Biol. Bull. **18** pp. 252-268 figs.—*H. americanus* natural history, HERRICK Washington D.C. Bull. Bur. Fish. **29** pp. 149-408.—*H. gammarus* habits, BARNES Dorchester Proc. Dorset Nat. Hist. F. Cl. **32** pp. 73-94 figs.—Culture, moulting, etc., MEEK Northumberland

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ERYONIDEA.

Spermatophores, ANDREWS Proc. U. S. Nation. Mus. 39 pp. 419-434 figs.

LORICATA.

Palinurellus Wienecki Mauritius, BOUVIER Bul. Muséum Paris 1910 p. 377.

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THALASSINIDEA.

Callianassa andax sp. n. Malacca, DE MAN Leiden Notes Mus. Jentink 33 p. 223.—*C. turnerana*, VANHÖFFEN Berlin SitzBer. Ges. natf. Freunde 1911 pp. 105-110 figs.—*C. turnerana* und *diademata*, LENZ Berlin SitzBer. Ges. natf. Freunde 1911 pp. 316-318 figs.

†*Callianassa* list of fossil spp. p. 42, *Burckhardti* sp. n. Argentina (Horizont der *Ostrea Ameghinoi*) p. 39 figs., *krausei* nom. n. für *prisca* Krause non Milne-Edwards p. 43, BÖHM Berlin Zs. D. geol. Ges. 1911 Monatsber.

Iconaxiopsis kermadecensis sp. n. Kermadec Isds., CHILTON Wellington Trans. N. Zeal. Inst. 43 p. 550 figs.

Thalassina anomala habits, PEARSE Philippine J. Sci. pp. 213-217 figs.

CARIDEA.

Parasitic protozoa, COUTIÈRE Paris C. R. Acad. sci. 152 pp. 409-411.

Allocaris gen. n. (*Palaeomonidae*). *sinensis* sp. n. Pekin, SOLLAUD Bul. Muséum Paris 1911 p. 50 figs.

Alpheidae regeneration of chelae, STOCKARD Biol. Bull. 19 pp. 243-255 figs.

Alpheopsis key to indo-pacific spp. p. 177, *consobrinus* p. 178, *chalciopie* p. 179, *Sibogae* p. 181, *A. (?) euryone* p. 184, MAN Résult. explor. Siboga Monogr. 39a.

Alpheus notes on spp., PEARSON Spolia Zeylan. Colombo 7 p. 176 figs.—*Alpheus*, groups defined p. 307, keys to indo-pacific spp. and varr. p. 308, *Hailstonei* var. *assimilans* p. 331, var. *laetabilis* p. 333, *collumianus* p. 334, *paradentipes* p. 336, *gracilis* var. n. *luciparensis* p. 337, *ventrosus* p. 339, *facetus* p. 340, *macrochirus* p. 343, *microstylus* p. 344, *Lutini* p. 346, *malleodigitus* p. 347, m. var. *gracilicarpus* p. 349, *Alcyone* p. 351, *Arethusa* p. 352, *paralcyone* p. 354, *paraculeipes* p. 356, *crinitus* p. 357, *parvus* p. 358, *consobrinus* p. 360, *spongiorum* p. 362, *Eulimene* p. 364, *pachychirus* p. 366, *Stanleyi* var. *deurmatius* p. 367, *frontalis* p. 369, *bidens* p. 371, *praedator* p. 373, *bicostatus* p. 375, *insignis* p. 377, *Philoctetes* p. 378, *gracilipes* p. 380, *tenuicarpus* p. 381, *tenipes* p. 383, *brevirostris* var. n. *angustodigitus* p. 385, *barbatus* p. 387, *pubescens* p. 389, *savuensis* p. 392, *Miersi* p. 393, *rapacida* p. 394, *lepidus* p. 397, *Sibogae* p. 398, *acutocarinated* p. 401, *macroscelus* p. 403, *bis-incisus* p. 405, b. var. *variabilis* p. 406, *proseuchirus* p. 407, *Coutieri* p. 409, *leviusculus* p. 411, *Euphrosyne* p. 413, *microrhynchus* p. 413, *Andouini* p. 414, *chiragricus* p. 415, *crassimanus* p. 417, *pareuchirus* p. 418, p. var. *Leucothea* p. 420, *leptochiroides* p. 421, *Polyxo* p. 423, *strenuus* p. 425, *pareuchirus* var. *imitatrix* p. 426, *pacificus* p. 427, *malabaricus* var. *leptopus* p. 429, *parvirostris* p. 432, *Hippothoe* p. 433, *euchirus* p. 434, *funafutensis* p. 436, *edamensis* p. 437, MAN Résult. explor. Siboga Monogr. 39a.¹

Anchistiella ident. with *Campylonotus* (q.v.), SOLLAUD Bul. Muséum Paris 1910 pp. 377-383 figs.

Arete key to spp. p. 163, *Iphianassa* p. 164, *dorsalis* p. 167, *maruteensis* var. *salibabuensis* p. 169, MAN Résult. explor. Siboga Monogr. 39a.¹

Aretopsis amabilis, MAN t.c. p. 171.

Athanas nitescens p. 1, *grimaldii* sp. n. N. Atlantic p. 4 figs., COUTIÈRE Bul. Inst. océan. Monaco 197.—A. key to spp. p. 147, *parvus* p. 148, *minikoensis* p. 149, *Sibogae* p. 151, *jedanensis* p. 154, *tenuipes* p. 157, MAN Résult. explor. Siboga Monogr. 39a¹.

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Nyctiphanes capensis S. Africa p. 19 fig., *simplex* E. Pacific p. 20, **spp. n.**, HANSEN t.c.

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figs., *affinis* p. 137 figs., CHILTON
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p. 96, *boopis*, *holoschista* p. 97, *interrupta*
p. 98, *wood-masoni*, *annandalei* p. 99,
spp. n., *oratoria* var. n. *perpensa*,
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Calcutta 6.—*S. quadratica* sp. n.
Japan, FUKUDA Dobuts. Z. Tokyo 23
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orientalis Korea p. 365, spp. n., figs.,
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p. 376, *pseudocuma* sp. n. N. Zealand
p. 377 figs., CALMAN t.c.

Cumella key to spp. p. 344, *forficula*
Siam p. 345, *clavicauda* W. Indies
p. 346, *leptopus* W. Indies p. 347,
hispidula Siam p. 347, *serrata* W. Indies
p. 348, *laevis* Siam p. 350, spp. n.,
figs., CALMAN t.c.

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t.c. p. 366.

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(?) *fistularis* Siam p. 383, spp. n.,
figs., CALMAN t.c.—*D. lucifera* Irish
Sea, MASSY Irish Nat. 20 p. 77.—*D.*
scorpioides, STAPPERS Duc D'Orléans
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p. 381, N. Zealand, spp. n., figs.,
CALMAN London Trans. Zool. Soc. 18.

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p. 367, *carinata* N. Zealand p. 368,
laevis N. Zealand p. 371, *costata* Siam
p. 372, *bicristata* Siam and Japan
p. 374, spp. n., figs., CALMAN t.c.

Leptostylis gracilis p. 116 figs.,
borealis p. 120 figs., STAPPERS Duc
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(N-91861)

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p. 102 fig., *Nathorsti* p. 104, *fulvus*
p. 105 fig., *pallidus* p. 106 figs., *acuti-*
rostris p. 107 fig., STAPPERS t.c.

Nannastacus notes on spp. p. 350,
lepturus Suez p. 352, *zimmeri* Ceylon
p. 352, *gibbosus* Siam p. 355, *reptans*
Siam p. 356, *minor* Siam p. 357, *tardus*
Siam p. 359, *agnatus* Siam p. 360, spp.
n., figs., CALMAN London Trans. Zool.
Soc. 18.

Petalosarsia declivis STAPPERS Duc
D'Orléans Camp. Arct. 1907 p. 121
figs.

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p. 360, *depressum* Siam p. 361, *bifrons*
India p. 362, *sordidum* Siam p. 363,
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Moskva Bull. Soc. nat. 244 pp. 377-509
pls. vii viii.—*A. aquaticus* Regeneration,
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PHREATOICIDEA.

[Vacant.]

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 figs., SARS Crustacea of Norway 5.
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 t.c. p. 396 figs.
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 p. 276, *subcristatus* S.-Atlantic p. 278
 figs., spp. n., with notes on other spp.,
 WOLFENDEN Deutsche Südpolar Exp.
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 fornia, ESTERLY Univ. Cal. Pub. Zool.
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 zool. 36 p. 29 figs.
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 polar Exp. 12.
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elongatus sp. n. Chesapeake Bay,
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 of Norway 5 p. 399 figs.
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muraenae p. 390, WILSON Proc. U. S.
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 of Norway 5.
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 figs.—*P. integer* sp. n. California p. 336
 figs., ESTERLY Univ. Cal. Pub. Zool.
 6.
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 p. 14, *perplexa* sp. n. Norway p. 4 figs.,
 SARS Arch. Math. Naturv. Kristiania
 31 No. 7.
- Platycopiidae* fam. n. of *Calanoida*
Amphiscandria, SARS t.c. p. 14.
- Pseudameira* gen. n. near *Parameira*
crassicomus nom. n. p. 400 *furcata*
 sp. n. Norway p. 401 figs., SARS Crus-
 tacea of Norway 5.
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manus, WOLFENDEN Deutsche Süd-
 polar Exp. 12 p. 325 figs.
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 ESTERLY Proc. Amer. Acad. Arts Sci.
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 figs., SARS Crustacea of Norway 5.
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 figs., SARS t.c.
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 Deutsche Südpolar Exp. 12 p. 259 figs.
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 FENDEN t.c. p. 193.
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 of Norway p. 430 figs.
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 sp. n. N. Atlantic, JUNGENSEN Køben-
 havn Nath. Medd. 64 p. 1 figs.; Nature
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acutus p. 253, *aequalis* p. 255, *medius*
 p. 256, *magnus* p. 258, Atlantic spp. n.,
 with notes on other spp., figs., WOL-
 FENDEN Deutsche Südpolar Exp. 12.
 —*S. vorax* p. 327, *angusta* p. 328,
 spp. n. California, figs., ESTERLY Univ.
 Cal. Pub. Zool. 6.
- Spinocalanus horridus* sp. n. p. 216
 figs., *magnus* p. 216 figs., *antarcticus*
 sp. n. p. 217 figs., Antarktis, WOL-
 FENDEN Deutsche Südpolar Exp. 12.
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 p. 394, spp. n. Norway, with figs.,
 SARS Crustacea of Norway 5.
- Stenocaris minor*, SARS t.c. p. 434
 figs.
- Stenocopia spinosa*, SARS t.c. p. 405
 figs.
- Stephus* notes on spp., WOLFENDEN
 Deutsche Südpolar Exp. 12 p. 204
 figs.
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 p. 434, *cyclopoides* sp. n. Norway p. 435
 figs., SARS Crustacea of Norway 5.
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 Carolina p. 388 figs., WILSON Proc.
 U. S. Nation. Mus. 39.
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XI. ARACHNIDA

TO WHICH ARE ADDED

GIGANTOSTRACA (XIPIIOSURA, TRILOBITA, EURYPTERIDA),
PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA
and PROTOTRACHEATA

ARRANGED BY

W. T. CALMAN, D.Sc.

CONTENTS.

	PAGE
Gigantostraca.	
I. TITLES=2800	4
II. SUBJECT-INDEX=2810-2827.. .. .	5
III. SYSTEMATIC INDEX=2831:—	
Trilobita	6
Xiphosura	8
Eurypterida	8
Pantopoda.	
I. TITLES=2800	9
II. SUBJECT INDEX=2807-2827.. .. .	9
III. SYSTEMATIC INDEX=2831	10
(N-9186 n)	d 5

Arachnida (incl. Tardigrada and Pentastomida).

I. TITLES=3000 11

II. SUBJECT-INDEX=3003-3027 :—

General, Economics ..	..	..	..	..	..	20
Structure ..	..	..	..	..	..	21
Physiology ..	..	..	..	..	..	21
Development..	..	..	..	..	..	21
Ethology ..	..	..	..	..	..	22
Variation and Aetiology ..	..	..	..	..	..	22
Distribution (Geographical and Geological)	..	..				22

III. SYSTEMATIC=3031 :—

General [vacant]						
Scorpiones ..	..	..	..	..	..	25
Pedipalpi ..	..	..	..	..	..	26
Palpigradi [vacant]						
Araneae ..	..	..	..	..	..	26
Aviculariidae ..	..	..	..	..	..	26
Uloboridae ..	..	..	..	..	..	27
Zoropsidae ..	..	..	..	..	..	27
Dictynidae..	..	..	..	..	..	27
Eresidae ..	..	..	..	..	..	27
Filistatidae ..	..	..	..	..	..	27
Oonopidae ..	..	..	..	..	..	27
Sicariidae ..	..	..	..	..	..	27
Leptonetidae ..	..	..	..	..	..	27
Dysderidae ..	..	..	..	..	..	27
Drassidae ..	..	..	..	..	..	28
Zodariidae ..	..	..	..	..	..	28
Hersiliidae..	..	..	..	..	..	28
Pholcidae ..	..	..	..	..	..	28
Theridiidae ..	..	..	..	..	..	28
Argiopidae ..	..	..	..	..	..	29
Minetidae ..	..	..	..	..	..	32
Thomisidae ..	..	..	..	..	..	32
Clubionidae ..	..	..	..	..	..	32
Agelenidae ..	..	..	..	..	..	33
Pisauridae ..	..	..	..	..	..	34
Lycosidae ..	..	..	..	..	..	34
Oxyopidae ..	..	..	..	..	..	34
Salticidae ..	..	..	..	..	..	34
Solifugae ..	..	..	..	..	..	35
Pseudoscorpiones ..	..	..	..	..	..	36

	PAGE
Opiliones	36
Acari	38
Oribatidae, etc.	38
Gamasidae	39
Ixodidae and Argasidae	39
Trombididae, etc.	40
Hydrachnidae	42
Bdellidae	43
Sarcoptidae	43
Tyroglyphidae	43
Demodicidae	44
Eriophyidae	44
Tardigrada	44
Pentastomida	44
Myriopoda.	
I. TITLES=3400	45
II. SUBJECT-INDEX=3403-3427 :—	
General	47
Structure	47
Development	47
Ethology	48
Variation	48
Distribution	48
III. SYSTEMATIC INDEX=3431 :—	
Chilopoda	49
Symphyla	50
Paupoda	50
Diplopoda	50
Prototracheata.	
I. TITLES=3200	53
II. SUBJECT-INDEX=3203-3227	53
III. SYSTEMATIC=3231	53

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Structure and classification of *Phacopidae* (*Trilobita*); Wedekind, **28**: Structure and affinities of Cambrian *Eurypterida*; Walcott, **26**: Structure of *Calymene*; Laurie, **15**: Hypostome of *Homalonotus*; Mailleux, **18**.

Paléontologie éthologique, *Eurypterida*, *Trilobita*; Dollo, **6**: Lebensweise der Trilobiten; Staff & Reck, **24**.

DISTRIBUTION = 2827.

(Geographical.)

New Zealand, *Carcinoscorpius rotundicauda*, introduced; Chilton, **2**.

(Geological.)

Cambrian.

Shropshire, *Trilobita* spp. n.; Cobbold, **5**.

China, N. America, *Trilobita* spp. n.; Walcott, **27**.

British Columbia, *Eurypterida* spp. n.; Walcott, **26**.

Ordovician.

Montgomeryshire, *Trilobita* sp. n.; Wade, **25**.

Minnesota, *Trilobita* sp. n.; Raymond & Narraway, **23**.

Beekmantown, *Trilobita* spp. n.; Raymond, **20**.

Chazy, *Trilobita* spp. n.; Raymond, **21**, **22**.

Silurian.

Norway, Kristiania area, *Eurypterus* spp. n.; Kiær, **14**.

Germany, *Trilobita* spp. n.; Wedekind, **28**.

Untersilur, Böhmen, *Trilobita* spp. n.; Holub, **11**.

Michigan, *Trilobita*, *Eurypterida*; Grabau, **10**.

Cincinnati, *Trilobita* sp. n.;
Foerste, 7.

Cincinnati and Lexington, *Trilobita* spp. n.; Foerste, 8.

Devonian.

Eastern N. America, *Eurypterida*
and *Trilobita*; Clarke, 3.

Middle Devonian, Wisconsin, *Trilobita*; Cleland, 4.

Carboniferous.

Arkansas, *Trilobita* sp. n.; Girty,
9.

Coal Measures, Scotland, *Glyptoscopus*; Peach, 19.

Steinkohlen-bassin des Donez, *Trilobita*; Kargin, 13.

Unter-carbon-kalkstein von Chabarny, *Trilobita*; Janischewsky, 12.

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Agraulos spp., COBBOLD t.c. p. 292 figs.—*A. sorge* sp. n. p. 82 pl. xv f. 1, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Albertella pacifica sp. n. p. 76 pl. xiv f. 6, China, Cambrian, WALCOTT t.c.

Amphilichas minganensis, RAYMOND Pittsburgh Ann. Carnegie Mus. 7 p. 72 figs.

Anomocare spp. n. *ephor*i p. 90 pl. xv figs. 8 8a, *lisani* p. 90 pl. xv figs. 9–9b, China, *convexa* Alabama p. 87 pl. xvii figs. 2–2d, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Anomocarella spp. n., *hermias* p. 92 pl. xv f. 10, *macar* p. 92 pl. xv figs. 11–11b, China, *smithi* Alabama p. 92 pl. xvii figs. 3 3a, Cambrian, WALCOTT t.c.

*Asaphellus Perner*i sp. n. Untersilur, Böhmen, HOLUB Prag Rozpr. České Ak. Frant. Jos. 20 p. 9 figs.—*A. gyracanthus* New York, New Jersey, p. 39 figs., *monticola* France p. 40 fig., spp. n., Ordovician, RAYMOND Pittsburgh Ann. Carnegie Mus. 7.

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Bathyrurus extans p. 46, *longispinus* p. 47, *spiniger* p. 48, figs., RAYMOND & NARRAWAY Pittsburgh Ann. Carnegie Mus. 7.

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Emmrichella subg. n. (*Ptychoparia*) genotype *P. theano* p. 79 pl. xiv figs. 9 9a, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Euloma bohemicum p. 3, *inexpectatum* p. 5, spp. n., Untersilur, Böhmen, figs., HOLUB Prag Rozpr. Česk. Ak. Frant. Jos. 20.

Glaphurus pustulatus, RAYMOND Pittsburg Ann. Carnegie Mus. 7 p. 74 figs.

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Heliomera sol, RAYMOND Pittsburg Ann. Carnegie Mus. 7 p. 77 figs.

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Homalonotus rhenanus hypostome, MAILLIEUX Bruxelles Bul. Soc. géol. 25 3 Proc. verb. pp. 113–115 figs.

Illænus? *cuspidatus* sp. n. Untersilur, Böhmen, HOLUB Prag Rozpr. Česk. Ak. Frant. Jos. 20 p. 11 fig.

Inouyia gen. n. genotype *Agraulos?* *capax* p. 80 pl. xiv f. 13, *thisbe* sp. n. p. 81 pl. xiv f. 14, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Isoteloides gen. n. (*Asaphidae*) p. 35, *whitfieldi* nom. n. pro *Asaphus canalis* Whitfield (type) p. 36 figs., Ordovician, RAYMOND Pittsburg Ann. Carnegie Mus. 7.—*I. angusticaudus*, RAYMOND t.c. p. 68 figs.—*I.* gen. n. type *Isotelus angusticaudum*, RAYMOND Vermont Rep. Geol. 7 p. 223.—*I. homalonotoides*, RAYMOND & NARRAWAY Pittsburg Ann. Carnegie Mus. 7 p. 52 figs.

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Levisia gen. n. genotype *Agraulos* *agenor* p. 86 pl. xv f. 7, *richardsoni* p. 86 pl. xvii figs. 4 4a, *nasuta* p. 87 pl. xvii f. 5 figs. 7 7a, spp. n., Canada, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Lichas praecursor sp. n. Untersilur Böhmen, HOLUB Prag Rozpr. Česk. Ak. Frant. Jos. 20 p. 7 fig.

Lisania gen. n. genotype *Anomocarella bura* p. 82 pl. xv f. 2, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Microtiscus sp., COBBOLD London Q. J. Geol. Soc. 67 p. 272 figs.

Nileus perkinsi sp. n. Vermont p. 69 figs., Ordovician, RAYMOND Pittsburg Ann. Carnegie Mus. 7.—*N. perkinsi* sp. n. Vermont, Chazy, RAYMOND Vermont Rep. Geol. 7 p. 224 figs.—*N. pater* sp. n. Untersilur, Böhmen

HOLUB Prag Rozpr. Česká Ak. Frant. Jos. 20 p. 10 figs.

Ogyginae subfam. n. (*Asaphidae*) p. 61, RAYMOND Pittsburg Ann. Carnegie Mus. 7.

Onchometopus simplex sp. n. Minnesota, Pennsylvania, Ordovician, p. 51 figs., RAYMOND & NARRAWAY t.c.—*O. obtusus*, RAYMOND t.c. p. 64 figs.

Paradoxides groomii p. 283, *dauidis* p. 285, *rugulosus* p. 286 figs., COBBOLD London Q. J. Geol. Soc. 67.

Phacopidae klassifikation, WEDEKIND Zs. D. geol. Ges. 63 pp. 317–336 figs.

Phacops pompeckji, *elegantulus*, spp. n., Deutschl. Obersilur, WEDEKIND t.c. p. 325 figs.

Phillipsia eichwaldi var. n. pp. 6–8 pl. i f. 1, *derbyensis* pp. 9–11 pl. i f. 2, *grünwaldti* pp. 11–13 pl. i f. 3, *mesotuberculata* pp. 13–14 pl. ii f. 4, Steinkohlenbassin des Donetz, KARGIN Izv. gorn. učilišč. 7 1.

Plomerops canadensis, RAYMOND Pittsburg Ann. Carnegie Mus. 7 p. 75 figs.

Proetus crassimarginatus, GRABAU Michigan Geol. Biol. Surv. Pub. Geol. Ser. 1 p. 207 figs.

Pterocephalus? liches sp. n. p. 80 pl. xiv f. 12, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Ptychocheilus decoratus sp. n. Untersilur, Böhmen, HOLUB Prag Rozpr. Česká Ak. Frant. Jos. 20 p. 8 fig.

Pterygomtopidella subg. n. von *Pterygomtopus* für *Phacops quadri-lineata* Lindstr., WEDEKIND Zs. D. geol. Ges. 63 p. 324.

Ptychoparia (Liostracus) pulchella p. 293 figs., *dubia* p. 295 figs., spp. n., Cambrian, Shropshire, COBBOLD London Q. J. Geol. Soc. 67.—*P. granosa* sp. n. p. 77 pl. xiv f. 8, *kochibei* sp. n. p. 78 pl. xiv figs. 10 10a, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Reedia gen. n. für *Phacops bronni*, WEDEKIND Zs. D. geol. Ges. 63 p. 322.

Solenopleura chalcon sp. n. p. 83 pl. xvi f. 5, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Sphaerocoryphe goodnowi, RAYMOND Pittsburg Ann. Carnegie Mus. 7 p. 78 figs.

Stephanocare? monkei sp. n. p. 77 pl. xiv f. 7, China, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Symphysurus convexus, RAYMOND Pittsburg Ann. Carnegie Mus. 7 p. 42 figs.

Trinucleus intermedius sp. n. Ordovician, Montgomeryshire, WADE London Q. J. Geol. Soc. 67 p. 449 figs.

~~*Vogdesia*~~ subg. n. (*Nileus*) type *Isotelus? bearsi* p. 70 figs., Ordovician, RAYMOND Pittsburg Ann. Carnegie Mus. 7.—V. gen. n. type *Isotelus bearsi*, RAYMOND Vermont Rep. Geol. 7 p. 225.

XIPHOSURA.

†*Xiphosura*, BATHER British Museum Guide p. 88.

Carcinoscorpius rotundicauda New Zealand, CHILTON Wellington Trans. N. Zeal. Inst. 43 p. 133.

†EURYPTERIDA.

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Éthologie, DOLLO Bruxelles Bul. Soc. géol. 23 Memoires pp. 400–405 figs.

Amiella gen. n. *ornata* sp. n. p. 27 pl. v. f. 4, British Columbia, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Eurypterus eriensis, GRABAU Michigan Geol. Biol. Surv. Pub. Geol. Ser. 1 p. 208 figs.—*E. norvegicus*, *minutus*, spp. n., Upper Silurian, Kristiania area, Norway, KLÆR Kristiania Skr. Vid. selsk. 1911 No. 7 pp. 14–15.

Glyptoscorpius minutisculptus sp. n. Coal Measures, Scotland, PEACH Glasgow Trans. Geol. Soc. 13 pt. 1 p. 1 fig.

Limulava subord. n. p. 21, Cambrian, WALCOTT Smithsonian Inst. Misc. Collect. 57.

Sidneyia gen. n. p. 22, *inexpectans* sp. n. p. 24 pls. ii–vii, British Columbia, Cambrian, WALCOTT t.c.

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II.—SUBJECT INDEX

2807—2827.

Jahresbericht für 1907; Lucas, **10** : für 1909; Lucas, **11**.

Decapodous *Pycnogonida*; Bouvier, **1, 3**.

Decapodous abnormality in larva of *Chaetonymphon*; Dogiel, **8**.

Structure and development of eyes; Sokolow, **13**.

Nervous system, Glands, and Ventral Organs in larvae; Dogiel, **6**.

Larval stages of *Anaphia* and *Pycnogonum*; Dogiel, **7**.

Pelagic habitat of *Endeis spinosus*; observations on heart and circulation; Cole, **5**.

Locomotion, feeding, pairing, &c., of *Nymphon*, *Phoxichilidium*, *Pycnogonum*; Prell, **12**.

Distribution.

Guyane française, *Pentapycnon* sp. n.; Bouvier, **1**.

Japan spp. n.; Loman, **9**.

Antarctic spp. n.; Bouvier, **2**.

South Sandwich Ids., notes on spp.; Bouvier, **4**.

III.—SYSTEMATIC INDEX = 2831.

Amnothea serratipalpis sp. n. Antarctic, BOUVIER Paris C. R. Acad. Sci. 152 p. 1140.—*A. superba* sp. n. Japan, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 11 figs.

Anaphia petiolata larvae, DOGIEL Northumberland Sea Fisheries Comm. Rep. Sci. Invest. 1910-1911 p. 26.

Ascorhynchus ramipes, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 6.

Cilunculus armatus, LOMAN t.c. p. 9 figs.

Chaetonymphon spinosum decapodous abnormality, DOGIEL Zool. Anz. Leipzig 38 pp. 321-323 fig.

Colossendeis Dofleini sp. n. Japan, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 4 figs.

Endeis spinosus habitat, circulation, COLE Biol. Bull. 18 pp. 193-203 figs.

Lecythorhynchus Hilgendorfi, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 8 figs.

Leionymphon gracilipes sp. n. Antarctic, BOUVIER Paris C. R. Acad. Sci. 152 p. 1140.

Nymphon stylops, *charcoti*, *tenuipes*, *proceroides*, spp. n., Antarctic, BOUVIER t.c. p. 1137.

Pallenopsis macronyx sp. n. Antarctic, BOUVIER t.c. p. 1139.

Parazetes auchenicus = *Ascorhynchus ramipes*, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 6.

Pentapycnon Geayi sp. n. Guyane française, BOUVIER Paris C. R. Acad. Sci. 152 p. 491.

Pseudopallene brachyura, *cristata*, spp. n., Antarctic, BOUVIER t.c. p. 1138.

Pycnogonum littorale larvae, DOGIEL Northumberland Sea Fisheries Comm. Rep. Sci. Invest. 1910-1911 p. 26.—

P. ungelatum sp. n. Japan, LOMAN München Abh. Ak. Wiss. Suppl. 2 Abh. 4 p. 7 figs.

ARACHNIDA

(INCL. TARDIGRADA & PENTASTOMIDA)

CONTENTS (*see p. 2*)

I.—TITLES.

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- Cooper, W. F. *vide* Nuttall, G. H. F.
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II.—SUBJECT-INDEX.

GENERAL ECONOMICS. 3003

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Bibliography.

Jahresbericht für 1907; Strand, 188: für 1909; Strand, 189.

Literature for 1910 on behavior of spiders; Turner, 200.

Bibl. of American *Araneae*; Petrunkevitch, 140: of *Ixodoidea*; Nuttall, Robinson & Cooper, 126.

Work of Saville-Kent on British *Hydrachnidae*; Soar, 179: Saville-Kent, 166.

General Works.

Gen. account of *Scorpiones*, *Pedipalpi*, *Solifugae*; Werner, 211: of *Hydrachnidae*; Saville-Kent, 166.

Collections, etc.

British Museum Guide to fossil *Arachnida*; Bather, 9.

Nomenclature, etc.

Nomenclature of *Ixodoidea*; Stiles, 181.

Namen für Körperabschnitte der Acari; Oudemans, 131.

Technique.

Fang u. Konservierung der *Hydrachniden*; Koep, 94.

Economics (see also Parasitism, p. 22).

Arachnida in relation to disease; Alcock, 1: Parasitic *Arachnida*; Brumpt, 26: Neveu-Lemaire, 119: Monograph of *Ixodoidea* continued; Nuttall & Warburton, 126: Revision

of *Ixodidae*; Neumann, 118: *Ixodoidea* of Sudan; King, 89: Zecken als Krankheitsübertrager; Nečajev, 117: Acariden als Uebertrager von Krankheiten; Jakimov u. Koli-Jakimov, 83.

Skorpionstiche; Schnee, 171.

Parasitisme (*Acari*) et Tumeurs; Borrel, 25: *Acari* und Geschwulsttätologie; Saul, 165.

Verbreitung des Aussatzes durch *Demodex*; Bertarelli und Paranhos, 16: *Acari* among lepers; Lefebvre, 102.

Epidemiologie der Krätze; Gottstein, 55.

Disease in man caused by tick-bites; Sant' Anna, 164: Symptoms following tick-bites in man; Nuttall, 122: *Dermacentor* on man; Savouré, 167: Relapsing fever transmitted by *Ornithodoros moubata*, review; Hindle, 68: Rocky mountain spotted fever tick; Hunter & Bishopp, 79: Carpinchos et Mal de Caderas; Migone, 111: Fumigation with SO₂ for destroying ticks; Howard, 76.

Transient parasitism of *Rhizoglyphus* (*Tyroglyphidae*) in man; Pepper & others, 139.

Pentastomum in Australian cattle; Johnston & Cleland, 85: Zecken in der Streu als Uebertrager des Piroplasma auf Rinder; Dzenciovskij, 42: Disease of calves in Uganda, trans. by *Rhipicephalus*; Theiler, 190.

Dissemination of chicken mites by sparrows; Ewing, 47: Spirochétiase des poules, trans. par Argas; Galli-Valerio, 50: Die Taubenzecke; Metz, 110.

Eriophyidae, injurious; Guercio, 61: Gallmilben; Rossinskij, 161: Schaden und Bekämpfung von *Tetranychus telarius*; Vasiljev, 201: Beschädigung von Getreide durch *Aleurobius farinae*; Potebnia, 148: Milben der Theepflanze; Bernard, 14, 15: The bulb mite (*Rhizoglyphus hyacinthi*); Windle, 215: *Acari* on citrus fruit; Quayle, 149: Orchard mites; Weldon, 210: *Tetranychus telarius* als Schädiger der Baumwollstande in Transkaspien; Simonov, 178: *Tetranychus bimaculatus* attacking cotton in South Carolina; Wilson, 214.

Utilizzazione dei Ragni contro Insetti nocivi all' Agricoltura; Pierantoni, 144.

STRUCTURE. 3007.

General.

Structure and affinities of Carboniferous *Arachnida*; Pocock, 147: of Triassic *Scorpiones*; Wills, 213.

Anatomie und Histologie von *Ixodes reduvius*; Nordenskiöld, 120: Structure of *Margaropus* (*Ixodidae*); Lahille, 100: Ausserer Bau von *Tetranychus telarius*; Vasiljev, 201: *Eriophyidae* (*Acari*) structure; Nalepa, 116: Anatomie der Tardigraden; Henneke, 67.

Special.

Structure of chela of †*Palaeomachus* (*Scorpiones*); Bather, 10: of foot in male *Ixodes*; Nuttall, 123: Crista ("sternite") of *Trombidiidae*; George, 51: External sex-characters in *Calchas* (*Scorpiones*); Birula, 18.

Terminaison du tube digestif des Ixodidés; Blanc, 22.

Gehirn und Bauchmark der Spinnen; Janeck, 84.

Lyriform organs and tactile hairs of *Araneae*; M'Indoo, 106: Hörhaare (Trichobothrien) und System *Arachnida*; Dahl, 34.

Anticoagulindrüse bei Zecken; Künssberg, 99.

PHYSIOLOGY. 3011.

Verdauungsvorgänge bei den Araneiden; Oetcke, 127.

Anticoagulindrüse bei Zecken; Künssberg, 99.

Lyriform organs and tactile hairs of *Araneae*; M'Indoo, 106.

Hörhaare (Trichobothrien); Dahl, 34.

Sight in *Dugesia* (*Araneae*); Petrunkevitch, 142.

Light reactions of *Grammonota* (*Trematidae*); Montgomery, 112.

DEVELOPMENT. 3015.

(Breeding Habits, etc. see Ethology, p. 22).

Oogenesis and Spermatogenesis of *Tardigrada*; Henneke, 67.

Parthenogenese bei *Tetranychus telarius*; **Vasiljev, 201.**

Embryonale und postembryonale Entw. der tetrapneumonen Spinnen; **Schminkewitsch, 170**: Dev. of *Margaropus* (*Ixodidae*); **Lahille, 100**: Entw. und Verwandlung von *Tetranychus telarius*; **Vasiljev, 201.**

Dev. of Coelom, heart, &c., in *Araneae*; **Faussek, 49.**

Larves d'Acariens Prostigmata; **Bruyant, 28.**

ETHOLOGY. 3019.

General.

Habits of *Coenothele* (*Araneae*); **Semichon, 172**: of *Galeodes* (*Solifugae*); **Fischer** Bombay J. Nat. Hist. Soc. 20 1911 p. 886: Lebensweise von *Tetranychus telarius*; **Vasiljev, 201.**

Breeding Habits, etc.

Courtship and mating in *Dugesia* (*Araneae*); **Petrunkévitch, 142**: Courtship in *Dysdera*; **Petrunkévitch, 141**: Pairing habits of *Nephila* (*Araneae*) and *Pedipalpi*; **Fischer** Bombay J. Nat. Hist. Soc. 20 1911 pp. 887 & 888: Copulation of *Epeiridae*; **Gerhardt, 53**: Cop. in *Ornithodorus*; **Nuttall & Merriman, 125.**

Sexual dimorphism, *Oribatidae*; **Koenike, 92.**

Number of eggs laid by spiders; **Girault, 54.**

Eiablage bei *Tetranychus telarius*; **Vasiljev, 201.**

Habitats.

Of *Hydracarina* in W. Ireland; **Halbert, 63.**

Anpassung zum Leben auf und im Sande bei *Psammobuthus zarudnyi*; **Birula, 18.**

Cave *Arachnida*; **McIndoo, 105**: Habits of cave spiders; **McIndoo, 104**: Cavernicolous *Araneae* and *Opiliones*; **Simon, 176**: Opilionid; **Grese, 58**: *Gamasidae* (*Acari*); **Bonnet, 24.**

Parasitism and Symbiosis (see also Economics, p. 20).

Parasitic *Acari*; **Ewing, 44**: Parasitism of *Cheletinae*; **Bruyant, 29.**

Bionomics and Life-History of *Ixodoidea*; **Nuttall & Warburton, 126**: Types of parasitism and habits of *Ixodidae* and *Argasidae*; **Nuttall, 123**: Adaptation of ticks to habits of host; **Nuttall, 121, 124**: Revision of *Ixodidae*; **Neumann, 118**: Habits and life-history of *Margaropus* (*Ixodidae*); **Lahille, 100**: *Hyalomma* et *Haemogregarina*; **Laveran & Pettit, 101.**

On Insects, *Acari*; **Silvestri, 174**: *Acari* on Dipteron; **Hadwen & Hewitt, 62.**

Myrmecophilous *Araneae* and *Acari*; **Donisthorpe, 37**: *Pseudoscorpiones*; **Wheeler, 212**: *Acari*; **Crawley, 31**: **Donisthorpe, 38, 39, 40**: **Silvestri, 175.**

Pseudoparasitisme d'une nymphe d'Hydrachnide; **André, 2.**

Gallenmilben Deutschlands; **Nalepa, 116.**

Milben-Domatien; **Boas, 23.**

Acari parasitizzati da *Laboulbeniomiceti*; **Paoli, 136.**

Miscellaneous.

Web of *Poecilochroa*; **Semichon, 173.**

Behaviour of *Misumena* (*Araneae*) in relation to colour; **Pearse, 138.**

VARIATION AND AETIOLOGY.

3023.

Variation in *Chelifer* (*Pseudoscorpiones*); **Ewing, 45.**

Phylogeny of *Lebertiidae* (*Hydrachnidae*); **Thor, 192.**

DISTRIBUTION.

GEOGRAPHICAL. 3027.

General.

Distrib. of *Araneae*, esp. *Nephila* in Southern Hemisphere; **Dahl, 33**: of *Opiliones* *Phalangini*; **Roewer, 158**: of *Ixodidae*; **Neumann, 118.**

Europe and Mediterranean Islands. d

Europe, *Acari* spp. n.; **Berlese, 12.**

S. Europe, *Opiliones* spp. n.; **Roewer, 158**: *Acari* spp. n.; **Berlese, 13**: *Gamasidae* (*Acari*) spp. n.; **Bonnet, 24.**

Scandinavia: Norway, *Tardigrada* sp. n.; Richters, 152: Sweden, *Tardigrada* spp. n.; Thulin, 197: Sweden, *Chelifer nodosus*; Tullgren, Entomol. Tidskr. Stockholm 32 p. 125.

Russian Empire, *Scorpiones*; Birula, 18: Russia, *Solifugae*; Zykoff, 217: *Eriophyes*, Verbreitung; Rossinskij, 161: Russia (Europe) *Ixodidae* list and sp. n.; Yakimov et Kohl-Yakimov, 216: Finland, *Hydrachnidae*; Ruoranen, 162: Smolensk, *Hydrachnidae*; Domračev, 36: Russland, Saratov, *Ixodidae* Verbreitung, sp. n.; Jakimov & Koli-Jakimova, 83: Gouv. Moskau, *Araneae*; Grese, 60: *Opiliones*; Grese, 59: Krim, *Opiliones* sp. n.; Grese, 58.

Germany: *Hydrachnidae* spp. n.; Viets, 204: *Hydrachnidae* spp. n.; Viets, 207: *Eriophyidae*; Nalepa, 116: Norddeutschland *Hydrachnidae* spp. n.; Koenike, 93: Holstein, *Hydrachnidae*, list; Viets, 208: Westfalen, *Hydrachnidae* spp. n.; Koenike, 90: *Hydrachnidae*; Thienemann, 191: Sachsen, *Hydrachnidae* spp. n.; Thor, 195: Oldenburg, *Hydrachnidae*; Viets, 203: Bonn, *Hydrachnidae* sp. n.; Koep, 94.

Holland: *Acari* sp. n.; Oudemans, 128: *Acari* spp. n.; Oudemans, 131.

British Isles: *Araneae*, new records; Jackson, 80: *Araneae* records; Jackson, 81: *Araneae* sp. n. and *Opiliones*; Pickard-Cambridge, 143; revision of *Pseudoscorpiones*, 1 n. sp.; Kew, 86.

Scotland: *Tardigrada* list & sp. n.; Murray, 114: Forbes, *Araneae*; Hull, 78: Stirlingshire, *Pseudoscorpiones*; Evans Ann. Scot. Nat. Hist. 1911 p. 185.

Scotland and North of England, *Araneae*; Hull, 77.

England: N. of England, records of *Araneae* and *Opiliones*; Falconer & others, Naturalist London 1911 pp. 68-73 233-235 363-364: [England?] *Trombididae* sp. n.; George, 52: Yorkshire, *Araneae*; Falconer, 48: E. Yorkshire, *Araneae*; Parsons & Stainforth, 137: London district, *Hydrachnidae*; Soar, 179: Dorset, *Araneae* sp. n.; Kulczynski, 97.

Ireland: *Araneae* sp. n.; Jackson, 82: *Araneae* records; Pack-Beresford,

132: *Hydrachnidae* spp. n.; Halbert, 63: *Hydrachnidae* sp. n.; Thor, 195: Clare Isd. district, *Araneae*; Pack-Beresford, 133: *Opiliones*; Pack-Beresford, 134: *Pseudoscorpiones*; Kew, 87: *Tardigrada* spp. n.; Murray, 113.

France: *Araneae* spp. n., *Opiliones* sp. n.; Simon, 176: Ardennes, *Trombidium*; Bruyant, 27: Lille, *Acari* sp. n.; Bruyant, 28: Paris, *Araneae* sp. n.; Berland, 11: Loire-inférieure *Araneae*; Pionneau, 146.

Spain, *Araneae* sp. n., *Opiliones* sp. n.; Simon, 176.

Portugal, *Araneae* spp. n.; Kulczynski, 97.

Italy: *Acari* spp. n.; Paoli, 135: *Eriophyidae* sp. n.; Corti, 30: Provincia Romana, *Araneae*, list; Antonelli, 3.

Switzerland: *Pseudoscorpiones*, revision; Lessert, 103: *Hydrachnidae*, records; Delachaux, Rev. suisse Zool. 19 pp. 409-431.

Hungary, *Araneae*; Pillich, 145.

Bulgaria, *Araneae*, list; Drensky, 41.

Asia and Malay Archipelago. e

Asia, *Opiliones* spp. n.; Roewer, 158.

East Asia, *Opiliones* spp. n.; Roewer, 159.

Russia (Asia), *Ixodidae*, list; Yakimov & Kohl-Yakimov, 216.

Turkistan, *Scorpiones* sp. n.; Birula, 19.

Kamtschatka, *Hydrachnidae* spp. n.; Thor, 196.

China, *Opiliones* sp. n.; Hirst, 72: Mongolia, *Scorpiones* subsp. n., *Solifugae* subsp. n.; Birula, 17.

Japan, *Opiliones* spp. n.; Hirst, 72: Great Loo-Choo Id., *Opiliones* sp. n.; Hirst, 72: Formosa, *Araneae* sp. n.; Matsumura, 107.

Himalayas and Tibet, *Scorpiones* spp. n.; Hirst, 71.

India and Ceylon, *Opiliones* spp. n.; Roewer, 157: Ceylon, *Pedipalpi* spp. n.; Gravely, 57: Calcutta, *Pedipalpi* spp. n.; Gravely, 56: Travancore, *Opiliones* sp. n.; Hirst, 72: Burma, *Pedipalpi* sp. n.; Hirst, 70.

Singapore, *Pedipalpi* subsp. n.;
Gravely, 56.

Niederländisch Ostindien, *Opiliones*
spp. n.; Roewer, 155.

Java and Sumatra: *Araneae* spp.
n.; Kulczyński, 98: *Acari* spp. n.;
Berlese, 13: Java, *Acari* spp. n.;
Oudemans, 130 & 131: *Acari* sp. n.;
Paoli, 135.

Sarawak, *Opiliones* spp. n.; Roewer,
157.

Celebes, *Araneae*, fauna and spp. n.;
Merian, 108: *Araneae* sp. n.; Strand,
187.

Aru und Kei-Inseln, *Araneae* spp.
n.; Strand, 182: *Opiliones* spp. n.;
Strand, 183: *Tardigrada* sp. n.;
Richters, 151: Aru Is., *Hydrachnidae*
spp. n.; Walter, 209.

Syria, *Araneae* spp. n.; Kulczyński,
97.

Africa and Madagascar. *f*

Africa: *Opiliones* spp. n.; Roewer,
158: *Acari* spp. n.; Berlese, 13:
distrib. of *Ornithodoros moubata*;
Merriman, 109.

North Africa, *Araneae* spp. n.;
Simon, 177: Algeria, *Araneae* sp. n.;
Simon, 176: Tunis, *Scorpiones* sp. n.;
Birula, 20: *Acari* sp. n.; Oudemans,
130.

Egypt and Sudan, *Acari* spp. n.;
Oudemans, 129: Anglo-Egyptian
Sudan, *Scorpiones*, *Pedipalpi*, *Soli-
fugae*; Werner, 211: Sudan, *Scor-
piones* var. n., *Solifugae* sp. n.; Hirst,
69.

Somaliland, *Scorpiones* sp. n.; Hirst,
71.

Ost-Afrika, *Hydrachnidae*; Viets,
202: Deutsch-Ost-Afrika, *Hydrach-
nidae*; Viets, 207.

Kamerun, *Hydrachnidae* spp. n.;
Viets, 205.

N. Angola, *Scorpiones* sp. n.; Hirst,
71.

S. Africa, *Acari* sp. n.; Oudemans,
128: *Ixodidae* sp. n.; Robinson, 154:
Orange River Colony, *Scorpiones*
sp. n.; Hirst, 71.

Rhodesia and Portuguese East Africa,
Scorpiones sp. n., *Pedipalpi*, *Solifugae*
spp. n.; Hirst, 73.

North America. *g*

Araneae, catalogue; Petrunkevitch,
140: *Acari* spp. n.; Berlese, 12:
Acari spp. n.; Ewing, 44: *Acari*
spp. n.; Paoli, 135: *Ixodidae* spp. n.;
Bishopp, 21: *Acari* spp. n.; Hall, 64.

United States, *Pseudoscorpiones* spp.
n.; Ewing, 45: New England, *Araneae*
spp. n.; Emerton, 43: *Eriophyidae*
spp. n.; Stebbins, 180: North Caro-
lina, *Araneae* spp. n., *Opiliones*;
Banks, 8: Ohio valley, *Araneae*;
McIndoo, 105: Illinois, *Acari* spp. n.;
Ewing, 46: Missouri, *Opiliones* sp. n.;
Crosby, 32: Louisiana, *Araneae* in
Spanish moss; Rosenfeld, 160. Cali-
fornia, *Opiliones* sp. n.; Banks, 5:
Pseudoscorpiones; Banks, 6: *Acari*
spp. n.; Hall, 65.

Mexico, *Acari* sp. n.; Silvestri, 175:
Tardigrada sp. n.; Heinis, 66.

Central and South America and West Indies. *h*

Araneae, catalogue; Petrunkevitch,
140.

S. America, *Acari* spp. n.; Berlese,
12: *Acari* spp. n.; Oudemans, 128:
Tardigrada sp. n.; Richters, 153.

Trinidad, *Acari* sp. n.; Trägårdh,
199.

Venezuela, *Scorpiones* sp. n.; Hirst,
71.

Brazil, *Gamasidae* sp. n.; Silvestri,
174: *Ixodidae* and *Argasidae* spp. n.;
Aragão, 4.

Paraguay, *Acari* (*Teneriffidae*) sp.
n.; Thor, 194: *Ixodidae* sp. n.;
Robinson, 154.

Uruguay, *Acari* sp. n.; Bruyant, 29.

Argentina *Eriophyes* sp. n.; Kieffer
und Herbst, 88.

Australasia. *i*

(Aru Ids., see under *e* above.)

New Guinea, *Opiliones* spp. n.;
Roewer, 156: Nord Neu Guinea,
Araneae spp. n.; Kulczynski, 95:
Süd Neu-Guinea, *Araneae* spp. n.;
Kulczynski, 96: Neu Guinea, Neu
Pommern etc., *Araneae* spp. n.;
Strand, 187.

Australia, *Araneae*, Catalogue; **Rainbow**, 150: N. and Centr. Australia, *Scorpiones* spp. n.; **Hirst**, 71.

New Zealand, *Araneae* spp. n.; **Hogg**, 75.

Arctic.

k

Arctic *Acari*; **Trägårdh**, 198.

Bären-Insel u. Spitzbergen, *Araneae* spp. n.; **Strand**, 184: *Tardigrada*; **Richters**, 152.

Atlantic Islands.

l

Madeira and Canaries, *Opiliones* spp. n.; **Roewer**, 158: Teneriffe, *Acari* (*Teneriffidae*) sp. n.; **Thor**, 194: Gomera, Canary Is., *Araneae* spp. n., *Opiliones* sp. n.; **Strand**, 186.

Indian Ocean Islands.

m

Islands of Western Indian Ocean, *Araneae* spp. n., *Opiliones* spp. n., *Pseudoscorpiones* sp. n.; **Hirst**, 74.

Pacific Islands.

n

(Vacant)

Antarctic.

o

(Vacant.)

GEOLOGICAL.

Fossil *Arachnida*, British Museum Guide; **Bather**, 9.

Silurian and Carboniferous, Britain, *Scorpiones*; **Bather**, 10.

Carboniferous, Britain, *Scorpiones* spp. n., *Pedipalpi* spp. n., *Araneae* spp. n., *Ricinulei* sp. n., *Haptopoda* sp. n., *Phalangiotarbi* spp. n., *Authracomarti* spp. n., *Opiliones* (?); **Pocock**, 147.

Trias. Lower Keuper, Worcestershire, *Scorpiones* spp. n.; **Wills**, 213.

Morphology and classification, carboniferous spp., **Pocock** London Monogr. Palaeont. Soc. 64 pp. 9-12.

†*Anthracoscorpio sparthensis* p. 20, *dunlopi* sp. n. p. 21 figs., *buthiformis* sp. n. p. 24 figs., Carboniferous, Britain, **Pocock** t.c.

†*Archaeoctonus* gen. n. p. 17, type *glaber* **Peach** p. 18 fig. **Pocock** t.c.

Babycurus ansorgei sp. n. N. Angola, **HIRST** Ann. Mag. Nat. Hist. ser. 8 8 p. 467.

Buthus eupeus subsp. n. *mongolicus* Mongolia centralis, **BIRULA** Rev. russ. ent. St. Petersburg 11 p. 195.—*B. minax*, *polystictus*, **HIRST** Ann. Mag. Nat. Hist. ser. 8 7 p. 217.—*B. (Buthacus) spatzi* sp. n. Tunis, **BIRULA** Zool. Anz. 37 p. 137 figs.

Calchas nordmanni, **BIRULA** St. Petersburg Ann. mus. zool. Ac. sc. 16 pp. 175-179 figs.

Chaerilus robinsoni sp. n. Malay Peninsula, **HIRST** Ann. Mag. Nat. Hist. ser. 8 8 p. 470.

†*Cyclophthalmus euglyptus*, **Pocock** London Monogr. Palaeont. Soc. 64 p. 19 fig.

†*Eobuthus holti* sp. n. Carboniferous, Rochdale, **Pocock** t.c. p. 14 figs.

Hemilychas subgen. n. of *Lychas*, **HIRST** Ann. Mag. Nat. Hist. ser. 8 8 p. 466.

Lychas (Hemilychas) alexandrinus sp. n. N. Australia p. 464, *L. ochraceus* sp. n. Orange River Colony p. 466, **HIRST** t.c.

†*Mesophonus* gen. n. p. 307, *perornatus* p. 311, *bromsgroviensis* p. 313, *gracilis* p. 317, *pulcherrimus* p. 318, spp. n. Trias, Worcestershire, figs., **WILLS** London Proc. Geol. Ass. 21.

†*Neobuthus* gen. n. near *Nanobuthus*, *berberensis* sp. n. Somaliland, **HIRST** Ann. Mag. Nat. Hist. ser. 8 8 p. 462.

†*Palaeomachus* gen. n. type *anglicus* H. Woodward, **Pocock** London Monogr. Palaeont. Soc. 64 p. 16 figs.—*P. anglicus* holotype redescri., **BATHER** Ann. Mag. Nat. Hist. ser. 8 8 p. 673 fig.

†*Palaeophonus caledonicus* synonymy and holotype, **BATHER** t.c. p. 676.

III.—SYSTEMATIC. 3031.

SCORPIONES.

Anglo-Egyptian Sudan, notes on spp., **WERNER** Rep. Wellcome Trop. Res. Lab. Khartoum 4 B pp. 179-188 figs.

Pandinus exitialis var. n. *sudanicus*, Obeid, Sudan, HIRST Ann. Mag. Nat. Hist. ser. 8 7 p. 219.

Parabuthus liosoma hunteri, HIRST t.c. p. 218.

Parabuthus truculentus sp. n. Portuguese East Africa, HIRST Manchester Mem. Lit. Phil. Soc. 56 No. 2 p. 2.

Psammobuthus gen. n. (*Buthidae*), *zarudnyi* sp. n. Turkestan, BIRULA Zool. Anz. 37 p. 69.—*P. zarudnyi* habitat, BIRULA St. Petersburg Ann. mus. zool. Ac. sc. 16 pp. 172–173.

Scorpiops austerus Himalayas p. 471, *tibetanus* Tibet p. 472, spp. n., HIRST Ann. Mag. Nat. Hist. ser. 8 8.

Tityus funestus sp. n. Venezuela, HIRST t.c. p. 467.

Urodacus hillieri sp. n. Central Australia p. 469, *hoplurus* subsp. n. *carinatus* Central Australia p. 470, HIRST t.c.

Uroplectes chubbi sp. n. Rhodesia, HIRST Manchester Mem. Lit. Phil. Soc. 56 No. 2 p. 5.

PEDIPALPI.

Rhodesia, HIRST Manchester Mem. Lit. Phil. Soc. 56 No. 2 p. 8.

Courtship, FISCHER Bombay J. Nat. Hist. Soc. 20 p. 888.

Charinides gen. n. near *Charinus*, *bengalensis* sp. n. Calcutta, GRAVELY Rec. Ind. Mus. Calcutta 6 p. 35 fig.

Damon variegatus, WERNER Rep. Wellcome Trop. Res. Lab. Khartoum 4 B p. 190 figs.

†*Geralinura britannica* sp. n. Carboniferous, Coseley, England, POCKOCK London Monogr. Palaeont. Soc. 64 p. 29 figs.

†*Graeophonus anglicus* sp. n. Carboniferous, Coseley, England, POCKOCK London t.c. p. 32 figs.

Hypoctonus birmanicus sp. n. Burma, HIRST Ann Mag. Nat. Hist. ser. 8 8 p. 380.

Phrynichus pusillus var. n. *gracillibrachiatus* Ceylon, GRAVELY Spolia Zeylan Colombo 7 p. 140.

Sarax sarawakensis subsp. n. Singapore, GRAVELY Rec. Ind. Mus. Calcutta 6 p. 37.

Schizomus (Trithyreus) lunatus sp. n. Calcutta, GRAVELY t.c. p. 33 figs.—*S. (T.) peradeniyensis* p. 137, *vittatus* p. 138, spp. n. Ceylon, figs., GRAVELY Spolia Zeylan Colombo 7.

PALPIGRADI.

[Vacant.]

ARANEAE.

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ULOBORIDAE.

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ZOROPSIDAE.

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DICTYNIDAE.

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ERESIDAE.

Dorceus viberti, trianguliceps, spp. n., Tunisie, SIMON Paris Ann. Soc. ent. **79** p. 292.

Eresus niger var. n. *latefasciatus* Algérie, SIMON t.c. p. 297.

FILISTATIDAE.

Filistata debilis sp. n. Algérie, SIMON Paris Ann. Soc. ent. **79** p. 301.—*F. Schmitzii* sp. n. Palestine, KULCZYNSKI Kraków Bull. Intern. Acad. **1911** B p. 13 fig.

OONOPIDAE.

Oonops olitor sp. n. Algérie, SIMON Paris Ann. Soc. ent. **79** p. 309.

SICARIIDAE.

Scytodes aruensis p. 131 fig., *subadulta* p. 132 fig., spp. n., Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. **34**.—*S. longipes* p. 451, *venusta* p. 452, *lugubris* ? p. 456, *domestica* p. 457 figs., KULCZYNSKI Kraków Bull. Intern. Acad. **1911** B.

LEPTONETIDAE.

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DYSDERIDAE.

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Harpactes globifer p. 328, *auriga* p. 329 fig., *forcipifer* p. 329, spp. n., *corticalis* subsp. n. *major* p. 329, N. Africa, SIMON Paris Ann. Soc. ent. 79.

Segestria lapidicola sp. n. N. Africa, SIMON t.c.

DRASSIDAE.

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Drassodes lacertosus p. 17, *aegyptius* p. 19 figs., KULCZYŃSKI Kraków Bull. Intern. Acad. 1911 B.—*D. russulus*, KULCZYŃSKI t.c. p. 463 figs.

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ZODARIIDAE.

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HERSILIIDAE.

Hersilia pernix sp. n. New Guinea, KULCZYŃSKI Nova Guinea 5 p. 433 fig.

PHOLOIDAE.

Physocyclus simoni sp. n. Paris, BERLAND Arch. Zool. Paris ser. 5 6 Notes p. cxi figs.

Psilochorus nigromaculatus sp. n. New Guinea, KULCZYŃSKI Nova Guinea 5 p. 436 figs.

Spermophora dubia sp. n. New Guinea, KULCZYŃSKI t.c. p. 435 fig.

THERIDIIDAE.

Argyrodes argenteolus sp. n. New Guinea, KULCZYŃSKI Nova Guinea 5 p. 438 fig.—*A. banksi* nom. n. for *A. rostratus* Banks p. 166, PETRUNKEVITCH New York Bull. Amer. Mus. Nat. Hist. 29.—*A. maculigera* p. 133 figs., *reticola*, *bandana*, p. 134 figs., *mertoni* p. 135 figs., spp. n., Aru- und Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.—*A. wolfi* sp. n. Neu Guinea, STRAND Arch. Natg. Berlin 77 Bd 1 p. 202.

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Thwaitesia scintillans sp. n. New Guinea, KULCZYNSKI t.c. p. 440 fig.

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Anthrobia europaea sp. n. France, SIMON Arch. Zool. Paris ser. 5 9 p. 187 fig.

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Argiope anasuja var. n. *fletcheri* CHAGOS Is., HIRST London Trans. Linn. Soc. ser. 2 Zool. 14 p. 385 fig.—*A. avara* varr. n. *tristipes* and *angulicosta*, abb. n. *brunnescentia* and *ocelligera*, *A. crenulata* ab. n. *pictula* p. 203, *A. fredericii* sp. n., *A. aetherea* varr. n. *melanopalpis* and *tangana*, *A. Wolfi* sp. n., Celebes to Polynesia, STRAND Arch. Natg. Berlin 77 Bd 1.—*A. celebesiana* sp. n. p. 203 figs., *A. c.* var. n. *possoica* p. 205 Celebes, MERIAN Zool. Jahrb. Syst. 31.—*A. doleschalli* var. n. *bivittata* p. 141, *A. aetherea* var. n. *keyensis* p. 145, *A. udgirica* sp. n. p. 142 figs., *doboensis* sp. n. p. 144 figs., *barbipoda* sp. n. p. 144 figs., ARU- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.—*A. picta* p. 471 fig., *maerens* sp. n. p. 473 fig., *aetherea* varr. n. *conjuncta*, *confusa* p. 475 figs., New Guinea, KULCZYNSKI Nova Guinea 5.

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Bathypantes banksi nom. n. for *Diplostyla pallida* Banks p. 216, PETRUNKEVITCH New York Bull. Amer. Mus. Nat. Hist. 29.—*B. setiger*, FALCONER Naturalist London 1911 p. 283 fig.—*B. theridiformis* p. 396, *intricata* p. 397 figs., spp. n., New Hampshire, EMERTON New Haven Trans. Conn. Acad. 16.

Ceratinella sphaerica p. 388, *carinata* p. 388, figs., spp. n., Massachusetts, EMERTON t.c.

Chondronephila subgen. n. zu *Nephila*, DAHL Zool. Anz. 37 p. 275.

Cyphonephila subgen. n. zu *Nephila*, DAHL t.c. p. 275.

Cyrtarachne friedericii sp. n. Neu Guinea, STRAND Arch. Natg. Berlin 77 Bd 1 p. 203.—*C. perspicillata* var. n. *possoica* Celebes, MERIAN Zool. Jahrb. Syst. 31 p. 242.—*C. xanthopyga* sp. n. New Guinea, KULCZYNSKI Nova Guinea 5 p. 503.

Cyrtophora citricola var. n. *minahassae* Celebes, MERIAN Zool. Jahrb. Syst. 31 p. 211.

Dicymbium pectinatum sp. n. New Hampshire p. 389 figs., EMERTON New Haven Trans. Conn. Acad. 16.

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Diplocephalus carolinus sp. n. North Carolina, BANKS Philadelphia Proc. Acad. Nat. Sci. 63 p. 447 fig.—*D. protuberans*, FALCONER Naturalist London 1911 p. 284 fig.

Diplostyla brevis sp. n. Massachusetts p. 397 figs., EMERTON New Haven Trans. Conn. Acad. 16.

Entelecara thorellii, FALCONER Naturalist London 1911 p. 283 fig.

Epeira versus *Araneus*, BANKS Entomol. News Philadelphia 22 p. 418.—*E. catarwa* sp. n. North Carolina, BANKS Philadelphia Proc. Acad. Nat. Sci. 63 p. 450 fig.—*E. sericata* (= *sclopetaria*) number of eggs, GIRAULT Ent. News 22 pp. 461–462.

Epeiridae copulation, GERHARDT Zool. Jahrb. Syst. 31 pp. 643–666 figs.

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Gasteracantha list of all spp. p. 222, divisions p. 230, *minahassae* sp. n. p. 235 fig., *clavatrix* p. 239 fig., Celebes, MERIAN Zool. Jahrb. Syst. 31.—*G. theisii* p. 493, *crucigera* p. 494, *crepidophora* p. 496, *similis* sp. n. New Guinea p. 497 figs., KULCZYNSKI Nova Guinea 5.—*G. similis* var. n. *melanotica* New Guinea, KULCZYNSKI op. cit. 9 p. 123. *G. taeniata* ab. n. *maculella*, *G. aruana* var. n. *keyana* ab. n. *antemaculata*, ARU- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 154.—*G. wolffi* sp. n. Admiralty Is., *wogeonis* sp. n. Schouten Id., *analispina* sp. n. New Guinea etc., p. 205, *analispina* var. n. *anirensis* Anir, *signifer* abb. n. *bistrigella*, *pustulinota*, *theisi* var. n. *quadrisignatella*, *bradleyi*, abb. n. *univittinota*, *trivittinota*, *strasseni* sp. n. N. Mecklenburg, *butleri* var. n. *elberti*, p. 206, STRAND Arch. Natg. Berlin 77 Bd 1.

Gea argiopides, *dubiosa*, p. 146 *virginis* p. 147, figs., spp. n., ARU- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. 34.—*G. subarmata*, KULCZYNSKI Nova Guinea 5 p. 476 figs.

Gonglydium atramentensiss spp. n. North Carolina, BANKS Philadelphia Proc. Acad. Nat. Sci. 63 p. 447 figs.

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Larinia vicina sp. n. New Guinea, KULCZYNSKI Nova Guinea 9 p. 121 figs.

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Leucauge eua sp. n. Eua, *L. granulata* var. n. *rimitara* Austr. Inseln, *L. grata* var. n. *squallyensis*, *anirensis*, *mathiasensis*, *tomaensis*, *bukaensis*, *maillandensis*, *salomonum*, STRAND Arch. Natg. 77 Bd 1 pp. 204-205.—*L. grata* p. 454 figs., *papuaana* sp. n. New Guinea p. 457 fig., *granulata* p. 458 figs., *argentata* subsp. n. *marginata* p. 460, *celebesiana* p. 461, KULCZYNSKI Nova Guinea 5.—*L. longula* p. 117 fig., *fasciventris* sp. n. New Guinea p. 119, KULCZYNSKI op. cit. 9.—*L. wokamara*, *cordivittata*, p. 139, *annulipedella* p. 140 figs., spp. n., Aru- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.

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Lionephila subgen. n. zu *Nephila*, DAHL Zool. Anz. 37 p. 276.

Lophocarenum excavatum p. 391 pl. ii, *arenarium* p. 391, *domiciliorum* p. 392, *flagellatum* p. 393, spp. n. New England, notes on other spp., figs., EMERTON New Haven Trans. Conn. Acad. 16.

Macrargus dentichelis, BERLAND Arch. Zool. Paris ser. 5 6 Notes p. cxiv figs.

Mesida gen. n. *humilis* sp. n. New Guinea, KULCZYNSKI Nova Guinea 5 p. 462 fig.

Micropoltys gen. n. *placenta* sp. n. New Guinea, KULCZYNSKI t.c. p. 504 figs.

Nephila pairing, FISCHER Bombay J. Nat. Hist. Soc. 20 p. 887.—*N. ambigua* p. 464, *pictithorax* p. 469, figs., spp. n. New Guinea, KULCZYNSKI Nova Guinea 5.—*N. imperialis* var. n. *novae-mecklenburgiae* Neu Mecklenb., STRAND Arch. Natg. Berlin 77 Bd 1 p. 204.—*N. maculata* var. n. *flavornata* p. 195, *N. sarasinorum* sp. n. p. 198 figs., *piepersi* p. 197 figs. Celebes, MERIAN Zool. Jahrb. Syst. 31.

Orsinome Elberti sp. n. Wetar, STRAND Arch. Natg. Berlin 77 Bd 1 p. 204.—*O. Lorentzii* sp. n. New Guinea, KULCZYNSKI Nova Guinea 5 p. 451 figs.

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Tetragnatha ferox var. n. *crossae* New Zealand, HOGG London Proc. Zool. Soc. 1911 p. 300 figs.—*T. gracilis* p. 181 figs., *serra* p. 182 figs., *hasselti* p. 185 figs., *mandibulata* p. 186 figs., MERIAN Zool. Jahrb. Syst. 31.—*T. mertonii* sp. n. Aru- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 137 figs.—*T. modesta* sp. n. Seychelles, HIRST London Trans. Linn. Soc. ser. 2 Zool. 14 p. 385 fig.—*T. papuana* p. 446, *lancinans* p. 447, *modica* p. 449, *micrura* p. 450, figs., spp. n. New Guinea, KULCZYNSKI Nova Guinea 5.—*T. phaeodactyla* sp. n. New Guinea, KULCZYNSKI op. cit. 9 p. 115 figs.—*T. rimitarae* sp. n. Austral. Inseln, STRAND Arch. Natg. Berlin 77 Bd 1 p. 205.

Thoracites (?) *aneptius* sp. n. New Guinea, KULCZYNSKI Nova Guinea 5 p. 501 figs.

Tmeticus and allied genera, HULL Newcastle Trans. Nat. Hist. Soc. n. ser. 3 pp. 573-587 figs.—*T. aestivalis*

p. 394, *tarsalis* p. 394, *entomologicus* p. 395, *tenuipalpis* p. 395, figs., **spp. n.** New England, EMERTON New Haven Trans. Conn. Acad. 16.

~~Trichonephila subgen. n. zu Nephila,~~
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~~Troglohyphantes pyrenaeus~~ p. 191 fig., subsp. n. *anophthalmus* p. 192, subsp. n. *cantabricus* p. 193 fig., *nyctalops* **sp. n.** Spain p. 194, SIMON Arch. Zool. Paris ser. 5 9.

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MINETIDAE.

Ero Cambridgei **sp. n.** England p. 61 figs., *ligurica* var. n. *lusitanica* p. 63 fig., KULCZYNSKI Krakow Bull. Intern. Acad. 1911 B.

THOMISIDAE.

Amyciaca albomaculata, KULCZYNSKI Nova Guinea 5 p. 511 fig.

~~Cetratus gen. n. p. 508, annulatus~~
sp. n. New Guinea p. 509 figs., KULCZYNSKI t.c.

Diaea papuana p. 136, *sticta* p. 137, *decempunctata* p. 139, *limbata* p. 139, *varians* p. 142, figs., **spp. n.** New Guinea, KULCZYNSKI op. cit. 9.

Domatha (?) celeris **sp. n.** New Guinea, KULCZYNSKI op. cit. 5 p. 506 figs.

~~Latifrons gen. n. near Tmarcis~~
p. 125, *picta* **sp. n.** New Guinea p. 126 figs., KULCZYNSKI Nova Guinea 9.

~~Loxoporetes gen. n. (Misumeneae),~~
~~Nouhuysii sp. n.~~ New Guinea, KULCZYNSKI t.c. p. 131 figs.

Lycopus atypicus **sp. n.** Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 155 figs.—*L. (?) kochii* **sp. n.** New Guinea, KULCZYNSKI Nova Guinea 9 p. 124 fig.

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Philodromus carolinus **sp. n.** North Carolina, BANKS Philadelphia Proc. Acad. Nat. Sci. 63 p. 452 figs.—*P. emarginatus* subsp. n. *lusitanica* p. 64

figs., *albidus* **sp. n.?** Portugal p. 65, KULCZYNSKI Krakow Bull. Intern. Acad. 1911 B.

Porrhopis poecila **sp. n.** New Guinea, KULCZYNSKI Nova Guinea 9 p. 129 fig.

Rhaebobates (?) latifrons **sp. n.** New Guinea, KULCZYNSKI op. cit. 5 p. 511.

Stephanopsis cristipes **sp. n.** New Guinea, KULCZYNSKI op. cit. 9 p. 145 fig.

Tharralea maculata **sp. n.** New Guinea, KULCZYNSKI op. cit. 5 p. 513 fig.—*T. variegata* **sp. n.** New Guinea, KULCZYNSKI op. cit. 9 p. 143 fig.

Thomisus spectabilis, KULCZYNSKI t.c. p. 130 fig.

Tibellus oblongus and *maritimus*, JACKSON Lanes. Nat. 3 p. 386 figs.—*T. oblongus, maritimus*, PICKARD-CAMBRIDGE Dorchester Proc. Dorset Nat. Hist. F. Cl. 32 p. 46 figs.

Xysticus rectilineus p. 31, *Tristramii* p. 32, *cribratus* p. 35, figs., KULCZYNSKI Krakow Bull. Intern. Acad. 1911 B.—*X. sebastianus* **sp. n.** Canaren, STRAND Arch. Natg. Berlin 77 Bd 1 p. 193.

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Castaneira luctifera **nom. n.** for *Thargalia luctuosa* Banks p. 454, PETRUNKEVITCH New York Bull. Amer. Mus. Nat. Hist. 29.

Chiracanthium bantaengi p. 280, *lompobattangi* p. 281, *minuhassae* p. 281, *klabati* p. 282 figs., *soputani* p. 282. **spp. n.** Celebes, MERIAN Zool. Jahrb. Syst. 31.—*C. mertoni* **sp. n.** Kobroor, STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 163 figs.

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VITCH New York Bull. Amer. Mus. Nat. Hist. 29.—*C. praestans* sp. n. Kew, PICKARD-CAMBRIDGE Dorchester Proc. Dorset Nat. Hist. F. Cl. 32 p. 50 figs.

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Gayenna minutissima nom. n. for *G. minuta* Banks p. 485, PETRUNKE-VITCH New York Bull. Amer. Mus. Nat. Hist. 29.

Heteropoda annulipoda p. 157 fig., *elatana*, *kobroorica* p. 158 figs., *teranganica* p. 159 figs., spp. n. Aru- u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.—*H. kabaënae* sp. n. Kabaena, STRAND Arch. Natg. Berlin 77 Bd 1 p. 207.—*H. venatoria* varr. n. *minahassae* p. 253, *montana* p. 254, *flavocephala* p. 255, *luwuensis* p. 256, *bonthainensis* p. 257, *striata* p. 257 fig., Celebes, MERIAN Zool. Jahrb. Syst. 31.

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Matidia viridissima sp. n. Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 163 fig.

Micaria gomeræ sp. n. Canaren, STRAND Arch. Natg. Berlin 77 Bd 1 p. 194.—*M. longispina* sp. n. Massachusetts p. 403, figs., EMERTON New Haven Trans. Conn. Acad. 16.

Micrommata formosa, KULCZYNSKI Krakow Bull. Intern. Acad. 1911 B p. 36 fig.

Olios attractus nom. n. for *Macrinus atomarius* Simon p. 498, PETRUNKE-VITCH New York Bull. Amer. Mus. Nat. Hist. 29.—*O. Wolfi* sp. n. Neu Guinea, STRAND Arch. Natg. Berlin 77 Bd 1 p. 206.

Palystes nigrocornutus sp. n. Celebes, MERIAN Zool. Jahrb. Syst. 31 p. 267.

Pandercetes niger p. 262 figs., *celebensis* p. 263, spp. n. *P. c.* var. n. (N-9186 n)

vulcanicola p. 264, Celebes, MERIAN Zool. Jahrb. Syst. 31.—*P. palliventris* sp. n. Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 160.

Phrurolithus borealis sp. n. p. 404, notes on other spp., figs., New England, EMERTON New Haven Trans. Conn. Acad. 16.—*P. minimus*, JACKSON Lancs. Nat. 3 p. 385 figs.

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Thelcticopis celebesiana p. 268, *nigrocephala* p. 270, spp. n. Celebes, MERIAN Zool. Jahrb. Syst. 31.—*T. rubristernis* p. 161 fig., *convoluticola* p. 162 fig., spp. n. Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.

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Agelena livida p. 44, *affinis* sp. n. Beirut p. 45, figs., KULCZYNSKI Krakow Bull. Intern. Acad. 1911 B.

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Hesydrimorpha gen. n., *gracilipes* sp. n. Kobroor, STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 168.

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Arctosa seminola Chamberlin nom. n. for *Lycosa floridiana* Chamberlin p. 552, PETRUNKEVITCH New York Bull. Amer. Mus. Nat. Hist. 29.

Lycosa astrigera var. n. *gorontalensis* p. 295 fig., *L. inops* var. n. *masarangi* p. 296 fig., *lompobattangi* p. 296, *L. minahassae* sp. n. p. 297 fig., *celebensis* sp. n. p. 298 fig., *bowonglangi* sp. n. p. 299 fig., Celebes, MERIAN Zool. Jahrb. Syst. 31.—*L. giebels* nom. n. for *L. inornata* Giebel p. 559, *gumia* nom. n. for *L. gulosa* Tullgren p. 560, PETRUNKEVITCH New York Bull. Amer. Mus. Nat. Hist. 29.—*L. quinaris*, EMERTON New Haven Trans. Conn. Acad. 16 p. 400 figs.

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OXYOPIDAE.

Oxyopes bantaengi sp. n. Celebes, MERIAN Zool. Jahrb. Syst. 31 p. 301.—*O. kobrooricus* p. 172 figs., *rouxi* p. 173 figs., *wokamanus* p. 174 fig., *palliventer* p. 175 figs., *tapponiformis* p. 176 figs., spp. n., Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.

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Plotius celebensis sp. n. Celebes MERIAN Zool. Jahrb. Syst. 31 p. 322 fig.

Pyroderes formosanus sp. n. Formosa, MATSUMURA Bruxelles Mem. Soc. ent. Belgique 18 p. 150.

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Thiania pulcherrima, MERIAN t.c. p. 310 fig.

Thorellia ensifera, MERIAN t.c. p. 318 fig.

Viciria tenera p. 315 fig., *hasselti* p. 317, MERIAN t.c.

Zenodorus wangillus sp. n. Aru-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34 p. 184 fig.

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†*Archaeometa* gen. n. (? *Argyopidae*) p. 36, *nephelina* Carboniferous, Coseley, England, p. 37 fig., Pocock London Monogr. Palaeont. Soc. 64.

†*Arthrolycosa* sp., Pocock t.c. p. 34 fig.

†*Eoeteniza* gen. n. (*Mesothelae*) p. 33, *silvicola* sp. n. Carboniferous, Coseley, England, p. 34 fig., Pocock t.c.

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Anglo-Egyptian Sudan, notes on spp., WERNER Rep. Wellcome Trop. Res. Lab. Khartoum 4 B pp. 190-194 figs.

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Synopsis with figs. of British and Irish spp., KEW Dublin Proc. R. Irish Acad. 29 B pp. 38–64 pls. iv–vi.—W. Ireland, KEW Dublin Proc. R. Irish Acad. 31 pt. 38.—Suisse, LESSERT Cat. Invert. Suisse fasc. 5 50 pp.—California, BANKS Pomona College J. Ent. 3 pp. 633–640 figs.

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Blothrus magnus *sp. n.* California p. 76 fig., EWING New York J. Ent. Soc. 19.

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Chernes panzeri *rec.*, EVANS Ann. Scot. Nat. Hist. 1911 p. 185.

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†*Anthracomartus hindi* p. 64 figs., *priesti* p. 67 figs., *spp. n.*, Carboniferous, England, Pocock London Monogr. Palaeont. Soc. 64.

†*Anthracosiro woodwardi* p. 70 figs., *fritschii* p. 73 fig., Pocock t.c.

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p. 58, *spp. n.*, ROEWER Arch. Natg. Berlin 77 Bd. 1 Suppl. 2.

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Gagrella def. p. 156, *albertisii* p. 157, *amboinensis* p. 158, ROEWER Nova Guinea 9.—*G. aruella* p. 203, *samangana* p. 204, *mertoni* p. 205, *spp. n.*, Aru-u. Kei-Ins., STRAND Frankfurt Abh. Senckenb. Ges. 34.—*G. hainanensis* Hainan p. 591, *grisea* Formosa p. 592, ROEWER Zool. Jahrb. Syst. 31.—*G. infuscata* Borneo p. 252 fig., *lineatipes* Natoena-Inseln p. 253 fig., *spp. n.*, ROEWER Leiden Notes Mus. Jentink 32.—*G. speciosa* p. 162, *prasina* p. 163, *spp. n.*, Brit. Indien, ROEWER Arch. Natg. Berlin 77 Bd. 1.

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†*Geraphyrinus angulatus* p. 49, *hindi* p. 51, *tuberculatus* p. 52, *eggintoni* p. 53, *torpedo* p. 54, all with figs., *angustus* p. 55, *spp. n.*, Carboniferous, Coseley, England, Pocock London Monogr. Palaeont. Soc. 64.

Gurua quadrispina p. 85, *longipes* p. 87, *palpinalis* p. 88, O.-Afr., Talboti W.-Afr. p. 86, *spp. n.*, ROEWER Arch. Natg. Berlin 77 Bd. 1 Suppl. 2.

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Ibalonius inscriptus p. 389 fig., *flavopictus sp. n.* Seychelles p. 389 fig., *lomani sp. n.* Seychelles p. 391, HIRST London Trans. Linn. Soc. ser. 2 Zool. 14.

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†*Nemastomoides elaveris*, Pocock London Monogr. Palaeont. Soc. 64 p. 83 fig.

Opilio spinulatus China p. 42, *Almasyi* Turkestan p. 44, *Lederi* Caucasus p. 45, *armatus* Turkestan p. 46, *coronatus* Italia p. 47, *spp. n.*, ROEWER Arch. Natg. Berlin 77 Bd. 1 Suppl. 2.—*O. trispinitrons sp. n.* China, ROEWER Zool. Jahrb. Syst. 31 p. 596 figs.

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Podoctis quinquespinosus sp. n. Neu Guinea, ROEWER Nova Guinea 9 p. 159 figs.

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Pseudobiantes gen. n. near *Epedanus* p. 632, type *japonicus* Japan p. 633 fig., *insulanus* Great Loo-Choo Id. p. 635, spp. n., HIRST Ann. Mag. Nat. Hist. ser. 8 8.

Pygoplus longipes sp. n. Neu Guinea, ROEWER Nova Guinea 9 p. 162 figs.

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Scleropilio gen. n. (*Phalangiini*) p. 31, *coriaceus* sp. n. Turkestan p. 32, ROEWER t.c.

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Systenocentrus japonicus Japan p. 625, *confucianus* Shensi, China, p. 627, spp. n., HIRST Ann. Mag. Nat. Hist. ser. 8 8.

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Labidostomidae, see *Oribatidae*.

Teneriffidae, see *Trombidiidae*.

ORIBATIDAE, ETC.

Damaeus cephalotus sp. n. Connecticut p. 504 fig., HALL Pomona College J. Ent. 3.

Eunicolina gen. n. (*Labidostomidae*) *tuberculata* sp. n. Italy, BERLESE Redia Firenze 7 p. 430.

Hermannia hieroglyphica sp. n. p. 646 fig. California, HALL Pomona Coll. J. Ent. 3.

Hoploderma capitata sp. n. Connecticut p. 508 fig., HALL t.c.

Labidostoma integrum Italy, *corcyraeum* Corfu, **spp. n.**, BERLESE Redia Firenze 7 p. 429.

Lohmannia spinosa **sp. n.** p. 645 fig., California, HALL Pomona Coll. J. Ent. 3.

Notaspis bilamellatus **sp. n.** California p. 505 fig., HALL t.c.—*N. nuda* **sp. n.** p. 641 fig. California, HALL t.c.—*N. curviseta* **sp. n.** p. 105 figs. Illinois, EWING Stud. Univ. Ill. 3 No. 6.—*N. lacustris* sex. dimorphism, KOENIKE Bremen Abh. natw. Ver. 20 pp. 233–235 figs.

Oribata setiformis **sp. n.** Connecticut p. 506 fig., *latincisa* var. *n. gigantea* Connecticut p. 508 fig., HALL Pomona College J. Ent. 3.—*O. humida* **sp. n.** p. 643 fig., *alata* var. *n. californica* p. 643 fig., California, HALL t.c.

Oribatella dentaticuspis **sp. n.** p. 99 figs. Illinois, EWING Stud. Univ. Ill. 3 No. 6.

Paraliodes **gen. n.** p. 645, *incurvata* **sp. n.** p. 646 fig. California, HALL Pomona Coll. J. Ent. 3.

Pelopsis **gen. n.** near *Pelops*, *nudiuscula* **sp. n.** Connecticut p. 508 fig., HALL t.c.

Xenillus blattarum **sp. n.** Java, OUDEMANS's Gravenhage Ber. Ned. Ent. Ver. 3 1911 p. 171.

GAMASIDAE.

Anystipalpus **gen. n.** (*Laelaptidae*) p. 184, *pericola* **sp. n.** Italy p. 185, BERLESE Redia 7.

Apolaelaps **subgen. n.** of *Laelaps* (q.v.), SILVESTRI Portici Boll. Lab. Zool. 5 p. 189.

Berlesia stylogera **sp. n.** Java, BERLESE Redia Firenze 7 p. 434.

Copriphs elongatus America, (*Pelethiphs*) *insignis* Italy, p. 185, *dermanyssoides* America, *equestris* Italy, p. 186, **spp. n.**, *crinitus* var. *n. curtispilus* Italy p. 186, BERLESE t.c.

Dermanyssus gallinae, *avium*, EWING Auk 28 pp. 335–340 figs. 1 2.

Discomegistus **gen. n.** near *Discozercon*, *pectinatus* **sp. n.** myriopodophilous Trinidad, TRÄGÅRDH Ark. Zool. 7 No. 12 21 pp. figs.

Eugamasus gomphius p. 387, var. *n. anconus* p. 389, *virei* p. 391, *omphalus* p. 392, *denticulatus* p. 394, figs., **spp. n.**, S. Europe, BONNET Arch. Zool. Paris ser. 5 8.

Gamasellus curvicrinus **sp. n.** Java, BERLESE Redia Firenze 7 p. 433.

Glyphopsis michaeli **sp. n.** p. 115 fig. Illinois, EWING Stud. Univ. Ill. 3 No. 6.

Laelaps (*Hypoaspis*) *integer* **sp. n.** (loc. ?), BERLESE Redia 7 p. 186.—*L. (Haemolaelaps) murinus* Ethiopia, *centrocarpus* Somaliland, *inops* Nigeria, *fahrenheiti* Germany, p. 432, (*Androlaelaps*) *sardous* Sardinia, *marshalli* Somaliland, p. 433, **spp. n.**, BERLESE t.c.—*L. (Apolaelaps) mexicanus* **sp. n.** Messico, SILVESTRI Portici Boll. Lab. Zool. 5 p. 189 figs.

Neopodocinum maius **sp. n.** Sumatra, BERLESE Redia Firenze 7 p. 431.

Pachyseius jacobsonianus **sp. n.** Java, BERLESE t.c. p. 431.

Pelethiphs **subgen. n.** of *Copriphs*, type *C. insignis* (q.v.), BERLESE t.c. p. 185.

Pergamasus nobilis **sp. n.** France, BONNET Arch. Zool. Paris ser. 5 8 p. 395 figs.

Urozercon melittophilus **sp. n.** p. 70 fig., var. *n. angustatus* p. 71 fig. Matto Grosso, SILVESTRI Portici Boll. Lab. Zool. 5.

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Astigma gen. n. (*Prostigmata*), *oudemansi* sp. n. (larva) Lille, BRUYANT Zool. Anz. 37 p. 260.

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Ettmülleria gen. n. (*Thrombidiidae*) type *sucidum*, OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 3 p. 124.

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Heterodispus subgen. n. of *Imparipes* (q.v.), PAOLI Redia 7 p. 255.

Imparipes (*Imparipes*) *hystrixinus typicus* p. 257 with varr. n. *circinnatus* and *radiatus* p. 258, *I. h. intermedius* and *I. h. degenerans* p. 259, (*Heterodispus*) *elongatus* var. n. *capensis* p. 263, PAOLI t.c.

Leeuwenhoekia gen. n. type *Heterothrombidium verduni* p. 138, *jaeger-skoeldi* sp. n. Cairo p. 138, OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 3.

Microdispus subgen. n. of *Diversipes* (q.v.), PAOLI Redia 7 p. 264.

Microtrombidium magnitarsa p. 92 *magnum* p. 91, spp. n., figs., Illinois, EWING Stud. Univ. Ill. 3 No. 6.—*M. helleri* sp. n. Surinam, notes on other spp., OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 3 p. 120.

Musitania gen. n. near *Microthrombidium verrucipes* sp. n. Holland, OUDEMANS t.c. p. 186.

Parateneriffia gen. n. (*Teneriffiidae*) p. 176, *bipunctinata* sp. n. Paraguay p. 177 figs., THOR Zool. Anz. 38.

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Pygmodispus gen. n. (*Tarsonemidae*) p. 269, *equestris* Italy p. 270, *calcaratus* N. America p. 271, (*Allodispus*) *latisternus* Italy p. 273, *brachiosus* Java p. 274, *stefaninii* Italy p. 276, spp. n., figs., PAOLI Redia 7.

Rohaultia gen. n. (*Trombidiidae*) p. 121, *biungulum* sp. n. Holland p. 122, OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 3.

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Tarsopolipus gen. n. (*Tarsonemidae*), *corrugatus* p. 183, *lagenaeformis* p. 184, spp. n., Italy, BERLESE Redia 7.

Teneriffia gen. n. p. 172, *quadripapillata* sp. n. Teneriffa p. 173 figs., THOR Zool. Anz. 38.

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Variatipes gen. n. (*Tarsonemidae*) p. 222, *montanus* p. 226, *major* p. 227, *quadrangularis* p. 230, *tridentinus* p. 231, *gigliolii* p. 233, spp. n., Italy, figs., PAOLI Redia 7.

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General account with notes on British spp., SAVILLE-KENT London J. Quek. Microsc. Cl. ser. 2 11 pp. 261-288.—Notes on spp., KOEP Bonn Verh. nathist. Ver. 67 pp. 283-302 figs.—Finland, RUORANEN Helsingfors Medd. Soc. Fauna et Fl. Fenn. 37 pp. 73-77.—Gouv. Smolensk, DOMRAČEV St. Petersburg Trdv. Soc. nat. C.-r. séances 42 1 pp. 195-199.—Westfalen, THIENEMANN Münster Jahresber. ProvVer. Wiss. 39 pp. 44-46.—Holstein, VIETS Arch. Hydrobiol. 6 pp. 297-306.—Ireland, notes on many spp., only figured spp. noted below, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i.—Records of spp. found near London by Saville-Kent, SOAR London J. Quek. Microsc. Cl. ser. 2 11 pp. 251-260.

Albia stationis male, VIETS Zool. Anz. 37 p. 441 fig.—*A. tenuipalpis* sp. n. Kamerun, VIETS op. cit. 38 p. 494.

Arrhenurus kanei p. 33 figs., *forcipatus* var. *perforatus* p. 35 figs., *sculptus* p. 35 figs., *ornatus* p. 36 fig., *battilijer* var. *dilatatus* p. 39 figs., *bipapillosus* sp. n. Co. Dublin p. 39 figs., HALBERT Dublin Proc. R. Dublin Acad. 31 pl. 39 i.—*A. honoratus* nom. n. für *meridionalis* Daday, THOR Zool. Anz. 38 p. 32.—*A. hammersteini* sp. n. O-Africa, VIETS Zool. Anz. 37 p. 153 fig.—*A. hammersteini*, VIETS Bremen Abh. natw. Ver. 20 p. 357 figs.—*A. turgidus* p. 246, *vietsi*, p. 249 *insulanus* p. 252, spp. n., Deutschl., figs., KOENIKE Bremen Abh. natw. Ver. 20.—*A. pulcher* p. 214, *alatus* p. 216, *angustiscutatus* p. 218, figs., spp. n., Aru-Ins., WALTER Frankfurt Abh. Senckenb. Ges. 34.

Atractides brevirostris sp. n., HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 16 figs.—*A. damkcheheri* sp. n. Kamerun, VIETS Zool. Anz. 38 p. 492.

Brachypoda celeripes, VIETS Bremen Abh. natw. Ver. 20 p. 346.—*B. modesta* sp. n. Deutschl., KOENIKE Bremen Abh.

natw. Ver. 20 p. 242 figs.—*B. violacea* sp. n. Kamerun, VIETS Zool. Anz. 38 p. 494.

Djeboa gen. n. *multidentata* sp. n. Kamerun, VIETS t.c. p. 494.

Durolebertia subgen. n. für *Lebertia* type *solida*, THOR Zool. Anz. 37 p. 385.

Encentridophorus chelatus sp. n. Aru-Ins., WALTER Frankfurt Abh. Senckenb. Ges. 34 p. 219 figs.

Eriki syn. of *Notomideopsis*, KOENIKE Zool. Anz. 38 p. 320.

Eylais discreta p. 5 fig., *discreta* var. *stagnalis* p. 5 figs., *infundibulifera* p. 6 fig., *relicta* sp. n. W. Ireland p. 6 figs., *similis* p. 7 fig., *celtica* p. 8 fig., HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i.—*E. angulata* p. 155 fig., *galeata* p. 156 fig., spp. n., O-Africa, VIETS Zool. Anz. 37.—*E. incurvata* p. 339 figs., *setipalpis* p. 341 figs., spp. n., Deutschl., *angulata* p. 351 fig., *degenerata galeata* p. 354 figs., VIETS Bremen Abh. natw. Ver. 20.—*E. thienemanni* sp. n. Deutschl., KOENIKE Zool. Anz. 37 p. 321 fig.—*E. sugambra* sp. n. Deutschl., KOEP Bonn Verh. nathist. Ver. 67 p. 284 fig.

Feltria rouxi, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 28 figs.

Frontipoda carpenteri sp. n. W. Ireland, HALBERT t.c. p. 22 figs.—*F. oxoidea* sp. n. Kamerun, VIETS Zool. Anz. 38 p. 493.—*F. musculus* vide *Marica cruenta*.

Hydrarachna scutata p. 12 fig., *distincta* p. 12 figs., *thoni* p. 13 figs., HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i.—*H. conjecta* var. n. *dissecta* Deutschl. p. 343, *eugeni* nom. n. for *inermis* Daday nec Piersig, VIETS Bremen Abh. natw. Ver. 20.—*H. mertonii* sp. n. Aru-Ins., WALTER Frankfurt Abh. Senckenb. Ges. 34 p. 209 figs.

Hygrobates soari sp. n. Kamerun, VIETS Zool. Anz. 38 p. 492.

Lebertia fimbriata, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 22 fig.—*L. (Pilolebertia) saxonica* p. 326 figs., (*Neolebertia*) *intermedia* p. 329 fig., Deutschl., *celtica* Irland p. 330, spp. n., THOR Zool. Anz. 38.—*L. (Mizolebertia) schmidtii* p. 420 figs., *asiatica* p. 423 figs., (*Pseudolebertia*)

convergens p. 425 figs., **spp. n.**, Kamtschatka, THOR t.c.—*L. granulosa* p. 324 fig., *annellata* p. 325 fig., *complexa* p. 326, *lacertosa* p. 327, *duricoria* p. 328, **spp. n.**, Deutschl., KOENIKE Zool. Anz. 37.—*L. pusilla* p. 236 figs., *oblonga* p. 239 figs., **spp. n.**, Deutschl., KOENIKE Bremen Abh. natw. Ver. 20.

Lebertiidae phylogeny, THOR Zool. Anz. 37 p. 386.

Mamersa rouxi **sp. n.** Aru-Ins., WALTER Frankfurt Abh. Senckenb. Ges. 34 p. 212 figs.

"*Marica cruenta* n. sp." England, SAVILLE-KENT London J. Quek. Microsc. Cl. ser. 2 11 p. 282; ident. with *Frontipoda musculus* var., SOAR l.c.

Megaluracarus **nom. n.** für *Megalarus* K. Thon 1900 nec Horsfield 1820, VIETS Zool. Anz. 38 p. 504.

Megapus spinipes var. n. *montanus*, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 20 fig.—*M. curvisetus* **sp. n.** Deutschl., KOENIKE Zool. Anz. 37 p. 329.—*M. kuhnei* **sp. n.** Kamerun, VIETS Zool. Anz. 38 p. 493.

Micruracarus **nom. n.** für *Micrurus* K. Thon 1900 nec Wagl. 1839, VIETS t.c. p. 504.

Oxus plantaris, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 25 figs.

Piona sp. in *Cygnus*, ANDRÉ Centr. bl. Bakt. Jena Abt. 1 58 Originale pp. 42–43.—*P. rotundoides* p. 30 figs., *paucipora* p. 30 fig., HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i.—*P. bipunctata*, WALTER Frankfurt Abh. Senckenb. Ges. 34 p. 220 figs.—*P. boopis* **sp. n.** Deutschl., KOENIKE Zool. Anz. 37 p. 330.

Protzia eximia, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 9 figs.

Pseudosperchon verrucosus, HALBERT t.c. p. 15 fig.

Sperchon brevirostris var. *pachydermis*, HALBERT t.c. p. 14 fig.—*S. compactilis* p. 323 fig., *rugosus* p. 324 fig., **spp. n.**, Deutschl., KOENIKE Zool. Anz. 37.

Thyas prospiciens **sp. n.** Deutschl., KOENIKE t.c. p. 322.—*T. lobata*, *setipes*, **spp. n.**, Deutschl., VIETS Zool. Anz. 38 p. 332 figs.

Unionicola rivularis **sp. n.** W. Ireland, HALBERT Dublin Proc. R. Irish Acad. 31 pt. 39 i p. 26 figs.—*U. latilaminata* **sp. n.** Kamerun, VIETS Zool. Anz. 38 p. 493.

BDELLIDAE.

Bdella illinoisensis p. 65, *lata* p. 69, *virgata* p. 70, *subnigra* p. 71, *anguinisetosa* p. 72, **spp. n.**, Illinois, figs., EWING Stud. Univ. Ill. 3 No. 6.

Cyta brevipalpa **sp. n.** p. 73 fig. Illinois, EWING t.c.

SARCOPTIDAE.

Alloptes longipes **sp. n.** Bermuda, EWING Psyche 18 p. 41 fig.

Canestrinia (*Eucanestrinia*) *procera* **sp. n.** Europe, BERLESE Redia 7 p. 184.

Dicanestrinia **subgen. n.** of *Canestrinia* type *C. cerambicis*, BERLESE, t.c. p. 184.

Eucanestrinia **subgen. n.** of *Canestrinia*, type *C. procrusti*, BERLESE t.c. p. 184.

Percanestrinia **subgen. n.** of *Canestrinia*, type *C. blaptis*, BERLESE t.c. p. 184.

Sarcoptes Epidemiologie, GOTSTEIN Med. Reform Berlin 19 pp. 41–45.

TYROGLYPHIDAE.

Aleurobius farinae Schaden am Getreide, POTEBNIA Južn. russ. selisk. choz. gazeta Char'kov 13 1911 10 pp. 7–9.

Anoetus longipes mit var. *brevipes* p. 171, *banjerwangicus* p. 172, *cirratus* p. 173, *indicus* p. 173, **spp. n.**, Java, OUDEMANS's Gravenhage Ber. Ned. Ent. Ver. 3 1911.—*A. tropicus* **sp. n.** Java, OUDEMANS t.c. p. 190.

Bonomoia **gen. n.** (*Tyroglyphidae*), *primitiva* **sp. n.** Java, OUDEMANS t.c. p. 174.

Calvolia **gen. n.** near *Vidia*, *hagensis* **sp. n.** Holland, OUDEMANS t.c. p. 187.

Glycyphagus tjibodas **sp. n.** Java, OUDEMANS t.c. p. 169.

Histiogaster javensis **sp. n.** Java, OUDEMANS t.c. p. 170.

Histiostoma phytophaga **sp. n.**, EWING Psyche 18 p. 41.

Lipstoria gen. n. p. 189, *mixta* sp. n. Java p. 190, OUDEMANS's Gravenhage Ber. Ned. Ent. Ver. 3 1911.

Rhizoglyphus sp. paras. in man PEPPER, SCHNAUSS & SMITH, University of Pennsylvania Medical Bulletin Philadelphia 21 1908 pp. 274-277 figs.—*R. hyacinthi*, WINDLE J. Econ. Ent. 4 pp. 127-129.—*R. prasini-maculosus* p. 110, *robustispinus* p. 112, spp. n., Illinois, figs., EWING Stud. Univ. Ill. 3 No. 6.

Tortonia gen. n. (*Tyroglyphidae*) type *intermedius*, *smits-van-burgsti* sp. n., OUDEMANS's Gravenhage Ber. Ned. Ent. Ver. 3 1911 p. 166.

Trichotarsus anthidii sp. n. Tunis, OUDEMANS t.c. p. 165.

Tyroglyphus macgillavryi sp. n. Jaka, OUDEMANS t.c. p. 169.—*T. mycoborus* p. 188, *eurynympha* p. 189, spp. n., Holland, OUDEMANS t.c.

DEMODICIDAE.

Demodex and Leprosy, BERTARELLI & PARANHOS Centralbl. Bakt. Jena Abt. 1 57 Originale pp. 490-493.

ERIOPHYIDAE.

Germany, Monograph, figs. of many spp., NALEPA Zoologica 61 pp. 167-293 6 pls.—Economic, GUERCIO Redia 7 pp. 1-64 figs.

Eriophyes Arten und ihre Verbreitung, Synopsis, ROSSINSKIJ Moskva Ann. Inst. agron. 17 3 pp. 1-119.—*E. baccharidis* sp. n. Argentina, KIEFFER & HERBST Centralbl. Bakt. Jena Abt. 2 29 p. 703.—*E. coryli* p. 15, *betulae* p. 16, *dentatae* p. 16, *amelanchieri* p. 39 fig., *rhois* p. 41 fig., *spicati* p. 43, *viburni* p. 48, spp. n., Massachusetts, STEBBINS Springfield Mass. Mus. Nat. Hist. Bull. No. 2.—*E. marginemvolvans* sp. n. Italy, CORTI Pavia Atti Soc. ital. Sc. nat. 49 p. 313 figs.

Paraphytoptus californicus p. 510, HALL Pomona College J. Ent. 3.

TARDIGRADA.

Classification, nomenclature, synopsis of genera, list of spp., MURRAY

London J. Quek. Microsc. Cl. ser. 2 11 pp. 181-198 figs.

Scotland, list and notes, MURRAY Ann. Scot. Nat. Hist. 1911 pp. 88-95.

Echiniscus intermedius p. 2 figs., *testudo*, *crassus*, *militaris* sp. n., p. 4 figs., *columinis* sp. n. p. 5 figs., W. Ireland, MURRAY Dublin Proc. R. Irish Acad. 31 pt. 37.—*E. spinuloides* "sp. n." (*spitsbergensis* var. *spinuloides*) p. 91 figs., *tympanista* sp. n. Scotland p. 92 figs., MURRAY Ann. Scot. Nat. Hist. 1911.—*E. fischeri* sp. n. Paraguay, RICHTERS Zool. Anz. 38 p. 275 fig.—*E. loxophthalmus* sp. n. Norwegen, RICHTERS in König Avifauna Spitzbergensis p. 285.—*E. merokensis* var. n. *suecicus* p. 13 fig., *lapponicus* sp. n. Sweden p. 15 figs., THULIN Ark. Zool. 7 No. 16.—*E. siegristi* sp. n. Mexico, HEINIS Rev. Suisse Zool. Genève 19 p. 263 fig.

Echiniscoides sigismundi, MURRAY Dublin Proc. R. Irish Acad. 31 pt. 37 p. 2 figs.

Hypsibius pallidus p. 36 figs., *conjungens* p. 37 figs., spp. n., *scoticus* var. n. *ommatophorus* p. 41 figs., Sweden, THULIN Ark. Zool. 7 No. 16.

Macrobiotus occidentalis, *richtersii* sp. n., p. 7 figs., *hibernicus* sp. n. p. 9 figs., *papillifer*, *scabrosus* sp. n., p. 10 figs., *schaudinni* p. 11 figs., W. Ireland, MURRAY Proc. R. Irish Acad. 31 pt. 37.—*M. schaudinni* p. 93 figs., *crenulatus* ? p. 94 figs., MURRAY Ann. Scot. Nat. Hist. 1911.—*M. macronyx* Anatomie, HENNEKE Zs. wiss. Zool. Leipzig 97 pp. 721-752 1 Taf.—*M. ampullaceus* sp. n. Sweden, THULIN Ark. Zool. 7 No. 16 p. 51 figs.—*Makrobiotus mertonii* sp. n. Kei-Ins., RICHTERS Frankfurt a. M. Abh. Senckenb. Ges. 33 p. 379 fig.

Pseudechiniscus gen. n. near *Echiniscus*, THULIN Ark. Zool. 7 No. 16 p. 18.

PENTASTOMIDA.

Pentastomum denticulatum in cattle New South Wales, JOHNSTON & CLELAND Sydney N.S.W. J. R. Soc. 44 pp. 315-318.

MYRIOPODA

CONTENTS (*see* p. 3)

I.—TITLES.

- Attems, Carl Graf.** Myriopoda exkl. Scolopendridae. (Die Fauna Südwest-Australiens, hrsg. v. W. Michaelsen u. R. Hartmeyer. Bd 3 Lfg 6.) Jena (G. Fischer) 1911 (145–204). 1
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- Brölemann, H. W. et Ribaut, H.** Diagnoses préliminaires d'espèces nouvelles de *Schendylina*. Paris Bul. soc. ent. 1911 (219–222). 14
- Chalande, Jules.** Sur le dédoublement segmentaire chez les Myriopodes. Paris C. R. Acad. sci. 152 1911 (1345–1347). 15
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- Chamberlin, Ralph V.** The Lithobiomorpha of Wisconsin and neighbouring states. *Canad. Entomol. London Can.* **43** No. 3 1911 (98-104). **20**
- Chamberlin, Ralph V.** Notes on Myriopods from Alaska and Washington. *Canad. Entomol. London Can.* **43** No. 8 1911 (260-264). **21**
- Chamberlin, Ralph V.** Some Lithobiomorpha from the region of San Francisco Bay. *Canad. Entomol. London Can.* **43** No. 11 1911 (378-385). **22**
- Cook, O. F.** Notes on the distribution of millipeds in southern Texas, with descriptions of new genera and species from Texas, Arizona, Mexico and Costa Rica. *Washington D.C. Smithsonian Inst. Proc. U. S. Nation. Mus.* **40** 1911 (147-167). **23**
- Cook, O. F.** New tropical millipeds of the order Merocheta, with an example of kinetic evolution. *Washington D.C. Smithsonian Inst. Proc. U. S. Nation. Mus.* **40** 1911 (451-473) pl. lx. **24**
- Cook, O. F.** The hothouse milliped as a new genus. *Washington D.C. Smithsonian Inst. Proc. U. S. Nation. Mus.* **40** 1911 (625-631). **25**
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- Evans, T. J.** The egg-capsule of *Glomeris*. *Zool. Anz. Leipzig* **37** 1911 (208-211). **28**
- Funck, Ch.** *vide* Schil, L.
- [**Gomilevskij, V.**] Гомилевский, В. *Julus guttulatus* Fir., многоножка или пятнистый кивсяк, как вредитель картофеля. [*Julus guttulatus* Fir. als Schädling der Kartoffeln.] *Selisk. choziain St. Peterburg* **26** 1911 (p. 1378). **29**
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- Issajew, W. M.** *vide* Isajev, W. M.
- Kunckel d'Herculais, J.** Observations sur les mœurs d'un Myriopode, la Scutigère coléoptérée. Son utilité comme destructrice des mouches, action de son venin, légende de sa présence accidentelle dans l'appareil digestif de l'homme. *Paris C. R. Acad. sci.* **153** 1911 (399-401). **33**
- Latzel, R.** Ein neues System der Myriopoden. *Carinthia II Klagenfurt* **101** 1911 (121-123). **34**
- Latzel, R.** Neuer Beitrag zur Myriopodenfauna Kärntens. *Carinthia II. Klagenfurt* **101** 1911 (123-125). **35**
- Lignau, N. G.** Neue Beiträge zur Myriopodenfauna des Kaukasus. *St. Peterburg Ann. mus. zool. Ac. sc.* **16** 1911 (37-60) Taf. i. **36**
- Lignau, N.** Ueber die Entwicklung des *Polydesmus abchasius* Attems. *Zool. Anz. Leipzig* **37** 1911 (144-153). **37**
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- Ribaut, H.** *vide* Brölemann, H. W.
- Schil, L. et Funck, Ch.** Sur la formation de l'appareil nucléolaire de l'ovocyte de *Glomeris marginata*. *Paris C. R. ass. anat.* **12** 1910 (89-94). **39**
- Schnee, S.** Sechs an mir selbst beobachtete Skolopendrenbisse und einiges über Skorpionenstiche. *Arch. Schiffshyg. Leipzig* **15** 1911 (156-160). **40**
- Silvestri, F.** Descrizione di nuovi Polydesmoideae termitofili. *Zool. Anz. Leipzig* **38** 1911 (486-492). **41**

Silvestri, F. Contributo alla conoscenza dei Mirmecofili del Messico. Portici Boll. Lab. Zool. **5** 1911 (172–195). **42**

Silvestri, F. Sulle ghiandole cefaliche o anteriori del *Pachyiulus communis* (Savi). Portici Boll. Lab. Zool. **5** 1911 (320–322). **43**

Strand, Embrik. Myriopoda für 1907. [Jahresbericht.] Arch. Natg. Berlin **74** (1908) Bd 2 H. 2 Lfg 3 1911 (191–200). **44**

Strand, Embrik. Myriopoda für 1909. [Jahresbericht.] Arch. Natg. Berlin **76** (1910) Bd 5 H. 2 = Ber. Leist. Ent. Berlin **1909** H. 6 = D. ent. Zs. Berlin **1910** H. 6: [1911] (1–22). **45**

Verhoeff, Karl W. Ueber Diplopoden. 20. (40.) Aufsatz: Neuer Beitrag zur Kenntnis der Gattung *Glomeris*. Stuttgart Jahreshefte Ver. Natk. **67** 1911 (78–147) 1 Taf. **46**

Verhoeff, Karl W. Zur Kenntnis der Craspedosomiden-Gattungen *Helvetiosoma* und *Orotrechosoma*. (Ueber Diplopoden, 44. Aufsatz.) Zool. Anz. Leipzig **38** 1911 (17–31). **47**

Verhoeff, Karl W. *Xylophageuma*, eine neue Gattung der Orobainosomidae. (Ueber Diplopoden, 45. Aufsatz.) Zool. Anz. Leipzig **38** 1911 (193–208). **48**

Verhoeff, K. W. *Tessinosoma* n. g. und die Cyphopoden der Mastigophorophyllidae. (Über Diplopoden, 46. Aufsatz.) Berlin SitzBer. Ges. natf. Freunde **1911** (286–297) 1 Taf. **49**

Verhoeff, K. W. Eine neue *Polydesmus*-Hochgebirgsform und die Gliederung der *Polydesmus*-Gonopoden. (Über Diplopoden, 47. Aufsatz.) Berlin SitzBer. Ges. natf. Freunde **1911** (297–302). **50**

Verhoeff, Karl W. Ueber *Brachychaeteuma* n. g. und *Titanosoma jurassicum* aus England. Zool. Anz. Leipzig **38** 1911 (455–458). **51**

Verhoeff, K. W. Zur Kenntnis des Mentum der Juloidea und über Protoiuliden. (Ueber Diplopoden, 49. Aufsatz.) Zool. Anz. Leipzig **38** 1911 (531–546). **52**

Verhoeff, Karl W. Die Diplopoden Deutschlands zusammenfassend bearb., zugleich eine allgemeine Einführung in

die Kenntnis der Diplopoden-Systematik, der Organisation, Entwicklung, Biologie, Geographie. Leipzig (C. F. Winter) Lfg 1 [1911] (xiii + 82) Taf. i–iv. Lfg 2 [1911] (83–162) Taf. v–viii. 26 cm. **53**

II.—SUBJECT INDEX.

GENERAL = 3403.

Jahresbericht für 1907; **Strand, 44**: für 1909; **Strand, 45**.

Ludwig Koch; **Dittrich, 26**.

General account of *Myriopoda*; **Pocock, 38**: *Diplopoda*; **Verhoeff, 53**.

Neues System der Myriopoden; **Latzel, 34**.

Skolopendrenbisse; **Schnee, 40**.

Julus guttulatus, Schaden an Kartoffeln; **Gomilevskij, 29**.

STRUCTURE = 3407.

Diplopoden Deutschlands; **Verhoeff, 53**.

Anatomie und Histologie von *Polyxenus lucidus*; **Isajev, 32**.

Mentum der Juloidea; **Verhoeff, 52**: Podosternit in *Helvetiosoma*; **Verhoeff, 47**: Cyphopoden der Mastigophorophyllidae; **Verhoeff, 49**: Gliederung der *Polydesmus*-Gonopoden; **Verhoeff, 50**: Dédoublement segmentaire; **Chalande, 15**.

Ghiandole cefaliche o anteriori del *Pachyiulus*; **Silvestri, 43**.

DEVELOPMENT = 3415.

Formation de l'appareil nucléolaire de l'ovocyte de *Glomeris*; **Schil & Funck, 39**.

Spermatogenesis of *Scolopendra heros*; **Blackman, 9**: von *Polyxenus lucidus*; **Isajev, 32**.

Parthenogenesis of *Titanosoma*; **Verhoeff, 51**.

Entwicklung des *Polydesmus abchasius*; Lignau, 37.

Accroissement binaire chez les Myriopodes; Chalande, 16.

ETHOLOGY = 3419.

Habits of Millipeds; Cook, 25: de *Scutigera*; Kunckel d'Herculais, 33.

Egg-capsule of *Glomeris*; Evans, 28.

Habitats of *Diplopoda*; Cook, 23.

Cavernicolous *Diplopoda*; Verhoeff, 48.

Termitophilous Millipede; Hirst, 30: *Diplopoda*; Silvestri, 41: Myrmecophilous habits of *Polyxenus*; Donisthorpe, 27: Myrm. *Diplopoda*; Silvestri, 42.

VARIATION, Etc. = 3423.

Kinetic evolution in *Diplopoda*; Cook, 24.

DISTRIBUTION = 3427.

Verbr. der *Brachydesmus* Arten; Attems, 3.

"Buiko" (?) *Diplopoda* sp. n.; Silvestri, 41.

Europe, *Diplopoda* spp. n.; Verhoeff, 46: Central Europe, *Diplopoda* spp. n.; Verhoeff, 47: S. Europe, *Chilopoda* spp. n.; Brölemann & Ribaut, 14.

Nord-westl. Kaukasus, *Pauropoda*, *Diplopoda*, spp. n.; Lignau, 36.

Diplophen Deutschlands; Verhoeff, 53: Baden, *Diplopoda* sp. n.; Verhoeff, 48.

British Isles, *Symphyla*; Bagnall, 6: *Pauropoda*; Bagnall, 7: Scotland and England, *Symphyla* synopsis and spp. n.; Bagnall, 8: N. England, *Diplopoda* sp. n.; Verhoeff, 51.

Pyrenees, *Polydesmus* subsp. and varr. n.; Brölemann, 12.

Luganer See, *Diplopoda* sp. n.; Verhoeff, 49.

Croatia, Herzegovina, Montenegro, Albania, *Brachydesmus* spp. n.; Attems, 3: Myriopodenfauna Kärntens; Latzel, 35.

Bengal, *Diplopoda* sp. n.; Hirst, 30.

Syrie, *Chilopoda* sp. n., *Diplopoda* spp. n.; Attems, 5.

Philippines, *Diplopoda* sp. n.; Silvestri, 41.

Maroc, Kabylie, *Chilopoda* spp. n.; Brölemann & Ribaut, 14.

W. Africa, *Diplopoda* sp. n.; Cook, 24: Côte d'Ivoire, *Chilopoda* sp. n.; Brölemann & Ribaut, 14.

Nördliche Central Afrikanische Seengebiet, *Chilopoda* subsp. n.; Attems, 4.

Erythraea, *Diplopoda* sp. n.; Silvestri, 41.

Rhodesia and Portuguese East Africa, *Chilopoda*; Hirst, 31.

S.E. United States, *Chilopoda* spp. n.; Chamberlin, 18.

Wisconsin and neighbouring States *Chilopoda* spp. n.; Chamberlin, 20.

Alaska and Washington State, *Chilopoda*, *Diplopoda* sp. n.; Chamberlin, 21.

Colorado, *Chilopoda*; Chamberlin, 19.

California and Idaho, *Chilopoda* sp. n.; Chamberlin, 17.

San Francisco Bay district, California, *Chilopoda* spp. n.; Chamberlin, 22.

Texas, Arizona, Mexico and Costa Rica, *Diplopoda* spp. n.; Cook, 23.

Mexico, *Diplopoda* sp. n.; Cook, 25: *Diplopoda* sp. n.; Silvestri, 42.

Cuba, *Chilopoda* sp. n.; Brölemann & Ribaut, 14.

Porto Rico and Guatemala, *Diplopoda* spp. n.; Cook, 24.

Costa Rica, *Diplopoda*; Brölemann, 10: *Diplopoda* sp. n.; Brölemann, 11.

Guyane française et Brésil, *Chilopoda* spp. n.; Brölemann & Ribaut, 14.

Bas- et Haut-Carsévène, *Chilopoda* spp. n.; Brölemann & Ribaut, 14.

Südwest Australien, *Chilopoda* spp. n., *Symphyla* sp. n., *Diplopoda* spp. n.; Attems, 1.

Canaries, *Chilopoda* spp. n., *Diplopoda* spp. n.; Attems, 2.

III.—SYSTEMATIC INDEX = 3431.

Chilopoda.

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(N-9186 n)

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Polygonarea imparata p. 161 fig., *repanda* p. 163 fig., spp. n., *repanda* subsp. n. *multipes* p. 164 fig. r. subsp. n. *conifera* p. 165 Australien, ATTEMS Fauna Südwest Austral. 3.

Pseudolithobius megaloporus, CHAMBERLIN Canad. Entomol. 43 p. 382.

Schendyla peyerimhoffi Maroc, *zonalis* S. Europe, spp. n., BRÖLEMANN & RIBAUT Paris Bul. Soc. Ent. 1911 p. 221.

Schendylurus tropicus Guyane française, *ludewaldi* Brésil, *lesnei* Haut Carsévène, p. 220, *verhoeffi* Bas Carsévène p. 221, spp. n., BRÖLEMANN & RIBAUT t.c.

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- Brachychaeteuma* gen. n. p. 456, *bagnalli* sp. n. England p. 457, VERHOEFF Zool. Anz 38.
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Dolichius cedrophilus p. 64, *domesticus* p. 65, *polyzonus* p. 66, spp. n., Syrie, ATTEMS Rouen Bul. Soc. Amis Sci. Nat. 46.

Eubrachydesmus subgen. n. of *Brachydesmus*, ATTEMS Wien Verh. ZoolBot. Ges. 61 p. 410.

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Iomus gen. n. p. 455, spp. n., Porto Rico, *incisus* p. 458 figs., *platanus* p. 459, *obliquus* p. 460, COOK Washington Proc. U. S. Nation. Mus. 40.

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II.—SUBJECT INDEX.

= **3203, 3227.**

GENERAL.

Jahresbericht für 1907; **Strand, 4**: für 1909; **Strand, 5.**

DISTRIBUTION.

Grenada, *Peripatus* sp. n., notes on other W. Indian spp.; **Brues, 1.**

Chile, *Peripatus*. sp. n.; **Johow, 3.**

New Guinea, *Paraperipatus*; **Horst, 2.**

SYSTEMATIC INDEX = **3231.**

Paraperipatus lorentzi, **Horst** Nova Guinea **9** p. 149 figs.

Peripatus Caribbean spp. table p. 306, *barboursi* sp. n. Grenada, W.I., p. 310 figs., *juliformis* var. *swainsonae* p. 314 figs., *jamaicensis* p. 316 figs., *biolleyi* (?) British Honduras p. 317, **Brues** Bull. Mus. Comp. Zool. Harvard Coll. **54**.—*P. umbrinus* sp. n. Chile p. 84 fig., *blainvillei* p. 87 figs., **Johow** Santiago de Chile Bol. Mus. Nac. **3.**

XII. INSECTA

ARRANGED BY

D. SHARP

CONTENTS

	PAGE
I. TITLES	8
II. SUBJECT INDEX :—	
General=3503-4803	126
Historical	126
Biographical	126
Bibliographical	126
Collections, Museums, Pedagogic	127
Technique, collecting	127
Economic entomology :—	
Nomenclature	128
General	128
Reports	129
Objects attacked	129
Creatures attacking	130
Insects and man, human disease	133
Insects and other animals	134
Bee culture	134
Silk	134
Structure: Morphology=3507-4807	
General	134
Of outer parts	134
Nervous system, sense organs	135
Myology	135
Alimentary canal	135
Circulatory organs, Respiratory organs	136
Glands and cells, blood	136
Reproductive organs	136
Eggs	136

Physiology=3511-4811 :—

General	137
Parthenogenesis, Viviparity	137
Sex	137
Cycles of generations	137
Hermaphroditism	137
Senses	138
Particular functions	138
Metabolic, Excretion	138
Respiration	138
Pigment, colour	139
Environmental	139
Regeneration	139
Chemical	139

Development=3515-4815 :—

General	139
Oogenesis, Spermatogenesis	139
Fertilisation	139
Embryology	140
Postembryology, Metamorphosis	140

Ethology=3519-4819 :—

General	141
Ant-life	141
Bee-life	143
Wasp-life	143
Termite-life	143
Cavernicolous	144
Aquatic	144
Gregariousness	144
Migration, flight	144
Sound-production	144
Food-habits	144
Parasitic	145
Symbiosis	145
Nests, Habitat	145
Sex-relations	146
Oviposition and parental	146
Hibernation	146
Phenology	146
Instinct and psychology	146
Attitudes	146
Luminosity	146
Resemblance and utility	147
Natural history, special cases	147
Pupal habits, cocoons	147
Insects and plants	147
Galls	148

	PAGE
Aetiology; Variation=3523-4823:—	
General	149
Variation	149
Teratology	149
Hybrids and Crosses	150
Inheritance	150
Evolution, including phylogeny.. .. .	150
Geographical or faunistic=3527-4827:—	
General	150
Arctic and antarctic	151
Insular (including New Zealand)	151
Palaearctic region:—	
Collective	152
Europe collectively	152
North Europe and Siberia	153
British Islands	154
Central and East Europe	158
France	162
South Europe and Mediterranean	163
Caucasus and West and Central Asia	166
Africa	167
Madagascar, etc.	171
Asia (tropical and Eastern)	171
Asiatic Archipelago	175
Australia and Tasmania	177
North America	178
Central America	182
Antilles	184
South America	184

III. SYSTEMATIC=3631-4831:—

General	187
Coleoptera=4831:—	
General	187
Cicindelidae	188
Carabidae	188
Paussidae	191
Halplidae	191
Dytiscidae	191
Gyrinidae	191
Hydrophilidae	191
Staphylinidae	192
Pselaphidae	198
Scydmaenidae	199
Silphidae and Clambidae	199
Platypyllidae (vacant)	
Trichopterygidae	200
Scaphidiidae	201
Histeridae	201

	PAGE
Phalacridae	202
Nitidulidae, Monotomidae	202
Trogositidae	202
Colydiidae	202
Discolomidae (vacant)	
Adimeridae	203
Rhysodidae (vacant)	
Cucujidae	203
Cryptophagidae	203
Lathridiidae	203
Mycetophagidae	203
Dermestidae, Byturidae	203
Byrrhidae	203
Georyssidae (vacant)	
Parnidae	203
Heteroceridae	204
Lucanidae	204
Passalidae	204
Scarabaeidae	204
Buprestidae	210
Throscidae, Eucnemidae	212
Elateridae	213
Cebrionidae (vacant)	
Rhipidoceridae	213
Dascillidae, Cyphonidae	213
Malacodermidae	213
Cleridae	217
Lymexylonidae	217
Ptinidae	217
Bostrychidae	217
Cioidae, Lyctidae	218
Tenebrionidae	218
Cistelidae or Alleculidae	219
Melandryidae	219
Lagriidae	220
Anthicidae, Pedilidae, Hylophilidae	220
Mordellidae	220
Rhipiphoridae	221
Cantharidae or Meloidae	221
Strepsiptera (<i>vide</i> p. 241)	
Oedemeridae	221
Pythidae	222
Pyrochroidae	222
Trictenotomidae	222
Curculionidae	222
Scolytidae	229
Brenthidae	231
Anthribidae	231
Cerambycidae	231
Bruchidae	236

	PAGE
Chrysomelidae	236
Erotylidae and Helotidae	240
Endomychidae	240
Coccinellidae	240
Strepsiptera	241
Hymenoptera=4631 :—	
General	241
Apidae	241
Diploptera (Vespidæ, Eumenidae and Masaridae)	249
Fossoria (Sphegidae, etc.)	251
Formicidae	254
Chrysidæ	261
Ichneumonidae	261
Braconidae	266
Evaniidae	270
Megalyridæ, Stephanidae	270
Trigonidae	272
Chalcididae (including Mymaridae)	272
Proctotrypidæ	276
Cynipidae	277
Oryssidae, Cephidae, Tenthredinidae, Xyelidae	272
Lepidoptera=4431 :—	
General	283
Rhopalocera :—	
General	283
Papilionidae	284
Pieridae	285
Danaidae, Ithomiidae, Acraeidae, Heliconiidae	286
Nymphalidae	287
Morphidae and allies	291
Satyridæ	289
Erycinidae, etc.	292
Lycaenidae	293
Hesperiidae	295
Heterocera :—	
Castniidae and Sesiidae	296
Sphingidae	297
Bombyces s.l., etc.	298
Noctuidæ	315
Geometridæ, Epiplemidæ, Uraniidae, etc.	326
Pyalidae, Thyrididae	335
Pterophoridae, Orneodidae	339
Tortricidae	340
Tineidae s.l.	341
Trichoptera	347
Neuroptera (including Panorpatæ)	349

Diptera=4231:—

General	352
Cecidomyiidae	352
Mycetophilidae	353
Chironomidae	354
Culicidae	356
Psychodidae	358
Simuliidae, Bibionidae	358
Blepharoceridae, Orphnephilidae	359
Tipulidae, Rhyphidae and Ptychopteridae, etc. ..	360
Stratiomyidae	361
Tabanidae.. .. .	361
Leptidae, Rhagionidae	362
Therevidae and Arthropidae	362
Asilidae	362
Acroceridae (vacant)	
Bombyliidae	363
Nemestrinidae	363
Empidae	363
Dolichopidae	363
Loxopteridae (vacant)	
Phoridae, Thaumatoxenidae	363
Platypezidae	364
Pipunculidae	364
Syrphidae	364
Conopidae	365
Oestridae	365
Muscidae Calyptratae	365
Muscidae Acalyptratae	368
Pupipara	374

Aphaniptera=3631 374

Hemiptera=4031:—

General	375
Heteroptera:—	
Pentatomidae	375
Corcidae, Lygaeidae, Pyrrhocoridae.. .. .	378
Tingitidae	379
Aradidae, Phymatidae.. .. .	379
Berytidae	380
Gerridae	380
Reduviidae, Nabidae	380
Cimicidae	381
Anthocoridae, Ceratocombidae, Henicocephalidae ..	381
Polycetenidae	381
Capsidae, Miridae	381
Saldidae	383
Hydrocorisae	383

	PAGE
Homoptera :—	
Cicadidae	384
Fulgoridae	385
Membracidae	386
Cercopidae	387
Jassidae	387
Psyllidae	388
Aphidae	389
Aleurodidae	391
Coccidae	391
Anoplura or Ellipoptera=3631	393
Thysanoptera=3631	393
Psocidae or Psocoptera=3831	394
Mallophaga or Lipoptera=3631	395
Termitidae or Isoptera	396
Embiidae or Embioptera	397
Perlidae or Plecoptera	398
Ephemeridae or Ephemeroptera=3831	398
Odonata or Paraneuroptera	398
Palaeodictyoptera and Fossils of extinct Orders.. .. .	401
Orthoptera=3831 :—	
General	402
Forficulidae	402
Hemimeridae	402
Blattidae	404
Phasmodae	405
Mantidae	406
Gryllidae	407
Locustidae	407
Acridiidae	409
Thysanura	411
Collembola	412
Protura	413

I.—TITLES.

[A-v, I.] А-въ, II. Обнаружение филлоксеры въ г. Новочеркасскъ. [Feststellung der *Phylloxera* in Novočerkassk.] Choz. na Donu Novočerkassk 6 1911 (529-530). [*Aphidae*.] 1

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II.—SUBJECT INDEX.

N.B.—The full reference may be obtained from "Titles" by means of the author's name and the number.

GENERAL.

Treatises, General Works.

A manual for the study of insects; **Comstock & Comstock**, 472.

Valore e essere delle specie; **Meyer**, 1575.

Enbiontische Fähigkeiten bei Insekten; **Krausse-Heldrungen**, 1310.

Popular; **Duncan**, 628.

Historical.

A history of the American entomological society; **Cresson**, 518.

Ent. in United States, historical; **Skinner**, 2329.

Biographical.

Clarke, Alexander Henry; Ent. Mag. **47** p. 264 & Ent. Rec. **23** p. 256.

Coquillett, D. W.; **Hewitt**, 1064.

Crutwell, Canon C. T.; Ent. Mag. **47** p. 114 & **Dixey**, p. 183 Ent. Rec. **23**.

Dixon, Roland Maurice; Zoologist; **1911** p. 118.

Harrison, Albert; **P.**, G. T. p. 264 Ent. Mag. **47**; Entomologist **44** p. 328 & Ent. Rec. **23** p. 282.

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Rollason, William Alfred; Ent. Rec. **23** p. 232 & Ent. Mag. **47** p. 141.

Scudder, Samuel Hubbard; **Kingsley**, 1259, with appreciations by other entomologists.—**B.**, **74**; Ent. Mag. **47** p. 279; Ent. Rec. **23** p. 255; Entomologist **44** p. 376.

Seifert, Otto; Canad. Ent. **43** p. 16.

Service, Robert; Zoologist **1911** p. 239.

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Tutt, J. W.; **Chapman**, 393.—With bibliography; **Turner** and others, 2579.—**Chapman** Zoologist **1911** p. 75; Ent. Mag. **47** pp. 70-72.

Verrall, G. H.; **Rowland-Brown** 2112 portrait; Ent. Rec. **23** p. 284; **Austen** Zoologist **1911** p. 394; **Distant** T.c. p. 396; with portrait Ent. Mag. **47** p. 262.

Wollaston, Edith; Ent. Rec. **23** p. 325.

Bibliographical.

Record of 1910 literature; **Sharp**, 2278.

Insecta Allgemeines für 1908 Jahresbericht; **Seidlitz**, 2252.—Jahresberichte über *Insecten* für 1908, mit Ausschluss der *Coleopt.*, *Hymenopt.*, *Rhynchoten* u. *Lepidopt.*; **Nägler**, **Lucas**, **La Baume**, 1680.—Jahresberichte über *Insecten* für 1909, mit Ausschluss der *Coleopt.*, *Hymenopt.*, *Lepidopt.*; **Lucas**, **Schouteden**, & **La Baume**, 1449.—Bericht über die wissenschaftlichen Leistungen im Gebiete der Entomologie während des Jahres 1907, Lfg 3; 1908, Lfg 1. Berlin (**Nicolai**), [1911], (III + 416; III + 318). 24 cm. = *Arch. Natg.*, Berlin, 74 (1908), Bd 2, H. 2, Lfg 3; 75 (1909), Bd 2, H. 2, Lfg 1.]—Bericht . . . des Jahres 1909. Heft 3–6. Berlin (**Nicolai**), [1911], (II + 309. II + 136, II + 486 II + 160). 24 cm. = *Arch. Natg.*, Berlin, 76, Bd 4, H. 1–2, Bd 5, H. 1–2.

Coleoptera für 1908 Jahresbericht; **Seidlitz**, 2253.

Hymenoptera für 1908 Jahresbericht; **Lucas**, 1447.—*Hymenoptera* 1909 Jahresbericht; **Lucas**, 1448.

Lepidoptera für 1908 Jahresbericht; **Strand & Ramme**, 2454.—*Lepidoptera* 1909; **Grünberg**, 974.

Trichoptera, &c., für 1907 Jahresbericht; **Lucas**, 1445.

Diptera für 1907 Jahresbericht; **Stobbe**, 2385.

Rhynchota für 1908 Jahresbericht; **Schouteden**, 2202.

Aphaniptera für 1907 Jahresberichte; **Stobbe**, 2386.

Mallophaga, *Anoplura*, *Thysanoptera*, *Apterygogenea* für 1907 Jahresbericht; **Lucas**, 1446.

Orthoptera für 1907 Jahresbericht; **La Baume**, 1342.

Revue critico-bibliographique No. 68–83 (Russ.); **Alphéraky & others**, 30; **Bartenev, &c.**, 111; **Jacentskovskij**, 1146; **Karavajev & Uvarov**, 1202.

Australian entomological literature in 1910; **Rainbow**, *Zs. wiss. Insektenbiol.* 7 pp. 324.

Canadian bibliography 1909; **Be-thune**, 167.

List of the scientific writings of **William Henry Edwards**; **Weeks**, 2709.

The entomological writings of **John Hamilton**, index to the new *Coleoptera*,

and account of his collection; **Klages**, 1270.

Bibliographie von **Edmund Reitter's** Bestimmungs-Tabellen; **Dalla Torre**, *Ent. Jahrb.* 21 pp. 143–151.

Curtis' British entomology; **Sherborn & Durrant**, 2286.

Collections. Pedagogic.

Resting-places of **E. Saunders's** collections; *Ent. Mag.* 47 p. 64.

Die **Azam- de Saulcy'sche** Orthopterensammlung; **Kheil**, *Intern. ent. Zs.* 5 p. 243.

Preservation of collections, tropics; **Howlett**, 1124.

Preservation of types; **Holland**, 1089.

Méthodes des investigation (Russ.); **Kuznecov**, 1340

Present methods of teaching entomology; **Bruner**, 290; **Comstock**, 471; **Fernald**, 745; **Osborn**, 1781.

Composition of taxonomic papers; **Muttkowski**, 1675.

Entomological publications; **Cockerell**, 434.

Kunst und wissenschaftliche Abbildung in besonderer Beziehung zur lepidopterolog. Literatur; **Skell**, 2328.

How to describe eggs; **Turner**, 2578.

Technique.

Measuring instrument; **Emery**, 673.

Examen à un fort grossissement, à l'état vivant; **Delcourt**, 564.

Untersuchung der Mundteile, *Lamellicorniern*; **Ohaus**, 1763.

Photographing *Diptera*; **Graham**, 920.

Köderfang; **Hartwig**, *Ent. Zs. Frankfurt* 25 pp. 109–115.

Chloroform statt Cyankali beim Ködern; **Hasebroek**, *Intern. Ent. Zs. Guben* 5 p. 133.

Collecting small *Coleoptera*; **Champion** p. 138 *Ent. Mag.* 47.

Zur Praxis des Käferfanges mit den Katscher; **Heikertinger**, 1028 & 1029.—**Wagner**, 2679.

Larven und Käfer. Praktische Anleitung zum Sammeln; **Mühl, 1662**.

Präparation der Käfer; **Reinberger Intern. ent. Zs. Guben 5 p. 113**.

Anleitung Schmetterlinge zu sammeln; **Schenkling, 2171**.

Colias, Fang-methode; **Unzicker, Zs. wiss. Insektenbiol. 7 p. 97**.

Méthode rapide pour la dessiccation des Lépidoptères; **Peytier Feuille jeunes natural. 41 p. 166**.

Rasches Kopieren der Borkenkäfergänge (Russ.); **Iljinski, 1139**.—Photographieren von Borkenkäfergängen aus d. Russ. übers.; **Winogradoff Ent. Bl. Berlin 7 pp. 146–147**.

Method of preparing Mosquitoes; **Bentley & Tayler J. Bombay Soc. 20 p. 883**.

Microlepidopteren, Präparation; **Mitterberger, 1610**.

Entomological boxes; **Maxwell-Lefroy Parasitology 4 p. 174**.

A simple trap-light device; **Barber D.C. Proc. Ent. Soc. Washington 13 pp. 72–73 pl. iv**.

Formalin a remedy for mould; **Sheldon p. 391 Ent. 44**.

Nomenclature.

Ueber die Typenbestimmung von Gattungen ohne ursprünglich bestimmten Typus. Ein Protest gegen die Anwendung des Artikels 30, Punkt g der Internationalen Regeln der zoolog. Nomenklatur; **Hendel, 627**.

Unalterable zoological names; **P.Z.S. London 1911 p. 101**.

Meigen's 1800 work; **Aldrich, 12; Coquillett, 487**.

Nomenclature des familles des Hémiptères; **Horváth, 1106**.

Nomenclature of economic insects; **Maxwell-Lefroy, 1539**.

Spelling in Latin, etc.; **Lyman, 1481**.

Französische Volksausdrücke für gewisse Falter; **Peter Soc. entomol. 25 p. 88**.

Economic Entomology.

General.

Training an econom. entomologist; **Maxwell-Lefroy, 1538**.

Economic entomology in India; **Maxwell-Lefroy & Howlett, 1540**.

Nomenclature of economic insects; **Maxwell-Lefroy, 1539**.

The work of the American association of economic entomologists; **Sanderson, 2135**.

Our insect friends and enemies; **Smith, 2344**.

Insect notes for 1910; **Johannsen, 1168**.

La station entomologique de la Faculté des Sciences de Rennes; **Vuillet Paris C. R. cong. soc. sav. 38 1909 [1910] pp. 263–266**.

Schädlinge an Kulturpflanzen aus deutschen Kolonien; **Aulmann, 51, 52, 56**.

Kolonialwirtschaftlich wichtige Coleopteren; **Kolbe, 1287**.

Plantations Africa; **Schouteden, 2205**.

Garten-u. Waldbaues Kiev (Russ.); **Pospëlov, 1931**.

Felder und Gärten in Turkestan (Russ.); **Plotnikov, 1904**.

Economic ent. in Trinidad; **Urich, 2954**.

Report on work; **Headlee, 1016**.

Address; **Howard, 1117**.

The importation into the United States of the parasites of the gipsy moth and the brown-tail moth; **Howard & Fiske, 1121**.

La station entomologique de la Faculté des Sciences de Rennes; **Guitel Paris C. R. congr. soc. sav. 38 (Lille) 1909 [1910] pp. 257–262**.

Massenaufreten namentlich schädigender Insektenformen; **Zimmermann, 2795**.

Im Fuszboden neuer Häuser und anderswo Schaden anrichtende Insekten (Ungarisch); **Jablonowski, 1145**.

Three alarming insect pests; **Cook Pomona College J. Ent. 3 pp. 576–577**.

Recherches dans des caisses à thé; **Laboissière Levallois-Perret Ann. ass. natural. 15–16 1911 pp. 17–18 fig.**

Nuisibles aux cultures; **Marchal**, 1505.

Vegetable garden, etc.; **Davis**, 554.

Trees and shrubs, Illinois; **Forbes**, 755.

Schädlinge des Garten- und Gemüsebaus im Gouv. Astrachan (Russ.); **Schreiner**, 2216.

Insects and spiders in Spanish moss; **Rosenfeld**, 2079.

Utilisierung rauberischer und parasitischer Insekten (Russ.); **Kurdiunov**, 1334.

Methoden zum Studium der Parasiten I u. II Grades unter den *Hymenoptera parasitica* (Russ.); **Ševyrev**, 2271.

Bekämpfung vermittelt Parasiten (Russ.); **Simon**, 2313.

Telenomus quaintancei and *Aphidius nigripes*; **Gahan**, 821.

Hunterellus hookeri; **Wood**, 2772.

Neuzeitlicher Vogelschutz Wirksamkeit; **Schwabe**, 2245.

Heat and mill insects; **Dean**, 560.

Calosoma sycophanta; **Burgess**, 311.

Pulicidae, destructive action of light on; **Cunningham**, 538.

Die „Tegesu-Angelschnur“; **Sasaki**, 2154.

Reports.

Norway, 1910 (Norweg.); **Schoyen**, 2212.

Sweden, 1910; **Tullgren**, 2564.

Report England; **Collinge**, 466, 467, 488.

Ireland 1910; **Carpenter**, 365.

Russland 1909 (Russ.); **Portschinsky**, 1926.

Gouv. Charkov 1910 (Russ.); **Glazunov**, 896.—Schädlinge der Landwirtschaft und des Gartenbaus im Gouv. Charkov 1910–1911 (Russ.); **Pačoskij**, 1788.

Gouv. Tula 1910 (Russ.); **Sopčenko**, 2358; 1911, Id. 2357.

R. Stazione di Entomologia di Firenze, 1909–1911; **Berlese**, 153.

Khartoum; **King**, 1258.

Connecticut Tenth report; **Britton**, 267.

(N-9186 j)

26th Report of the State entomologist on injurious and other insects of the State of New York; **Felt**, 727.

Illinois; **Forbes**, 755.

Canada; **Hewitt**, 1061a.

Maine 1911; **Johannsen & Papeh**, 1169.

New Jersey 1910; **Smith**, 2343.

Insects of the year 1911 in Iowa; **Webster**, J. Econ. Ent. 4 pp. 524–527.

Hawaii 1909 & 1910; **Perkins**, 1828.

Objects attacked.

Cotton; in Egypt; **Andres**, 34.—Cotton and corn, insects taken in dry cotton bolls and in dry cornstalks; **Tucker**, 2562.—Neuer Baumwollschädling; **Aulmann** Tropenlandwirt Berlin 1 p. 3.—Baumwollstanden in Transkaspien (Russ.); **Uvarov**, 2598.—Gemüse und Baumwollstanden *Aphis gossypii* (Russ.); **Vasiljev**, 2613.—Baumwollstände (Russ.); **Simonov**, 2314 & 2315.

Obstbäume in der Krim 1910 (Russ.); **Mokrzecki**, 1624.

Schädlinge des Obstbaues; **Zacher**, Jahresber. Ver. Cultur Breslau 88 pp. 8–17.

Fruit trees (Japanese); **Kuwana**, 1337.

Apple and pear Membracids; **Hodgkiss**, 1076.

Apple, *Heterocordylus* and *Lygidea*; **Crosby**, 526.—Apfelbäume, *Capsidae* (Norweg.); **Schoyen**, 2211.

Peach trees New Jersey; **Smith**, 2339.

Linde im Kaukasus von *Hylastes tiliae*, *Ernoporus caucasicus*, *Ernoporus tiliae* (Russ.); **Vinogradov-Nikitin**, 2645.

Parasites des chênes en Ille-et-Vilaine et Loire-Inférieure; **Vuillet**, 2670.

Südbrasilianische Schädlinge der Feige; **Ihering**, 1132.

Pine forests, *Cedestis gysselinella*; **Trägårdh**, 2552.

Coniferae Himalaya; **Stebbing**, 2369.

Kiefer in Polen durch *Myelophilus piniperda* (Russ.); **Voroncov**, 2655.

Pinus scopulorum in Nebraska; **Swenk, 2489.**

Palms in Samoa; **Gehrmann, 856;** also Tropenpflanzer 15 pp. 92-98.

Citrus fruit; **Quayle, 1959.**

Citrus plant lice, natural enemies of the; **Essig, 708.**

Cinchona; **Roepke, 2057.**

Rubber-Insekten, Java; **Roepke, 2059.**

Sugar cane; **Urich, 2595.**—The sugar-cane, Hawaii; **Van Dine, 2691.**—Sugar-cane, Formosa; **Matsumura, 1536.**—Sugar and potatoes, India; **Fletcher, 747.**—Sugar-cane; **Quelch, 1962; Rodway, 2056.**

Kartoffelbohler, *Nitocris*; **Morstatt, 1647.**

Schädlinge der Kokospalme; **Preuss, 1947.**—Coconut Palm; **Froggatt, 798.**

Kakao; **Aulmann & La Baume, 57.**

Aulmann, Gg. & La Baume, W. Die Schädlinge des Kaffees. (Die Fauna der deutschen Kolonien, hrsg. v. Zool. Museum Berlin. Reihe 5. H. 2.) Berlin (R. Friedländer & S.) 1911 (III + 98). 23 cm. 2,40 M.

Sweet potato in Hawaii; **Fullaway, 814.**

Kartoffeltriebbohler; **Lüstner Geisen** heim Ber. Lehranst. Obstbau 1910 1911 p. 154.

Riso, Friganeidi, Tafani, larve di Tipule nocivi al; **Guercio, 987.**

Mais, (Russ.); **Vasiljev, 2608.**

Bahnen und Mais von *Aphis evonymi* (Russ.); **Kurdjumov, 1331.**

Saaten im Gouv. Kiev (Russ.); **Pospölov, 1932.**

Cereals, stored; **Chittenden, 405.**

Getreidespeichern (Russ.); **Potebnia, 1936.**

Himbeersträucher durch *Byturus tomentosus* im Gouv. Moskau (Russ.); **Korolikov, 1292.**

Hedysarum coronarium, Tunis; **Perez, 1825.**

Alfala, *Eurymus*; **Wildermuth, 2752.**

The timothy stem-borer, *Mordellistena*, new timothy insect; **Phillips** U. S. Dep. Agric. Ent. Bull. 95 p. 1.

Bamboos (Japanese); **Mimura, 1606.**

Vite Coleotteri; **Canavari, 361.**—Sackraupen an Reben; **Wahl** Bad. landw. Wochenbl. Karlsruhe 1911 p. 495.—Rebensschädlinge; **Schwangart, 2246.**

Creatures attacking.

(a) *Coleoptera.*

Laubkäfer (Russ.); **Golovianko, 901.**

Latheticus oryzae; **Chittenden, 407.**

Rhizopertha dominica; **Chittenden, 408.**

Dinoderus truncatus; **Chittenden, 409.**

Nashornkäfer und Herzfäule an Kokospalmen; **Morstatt, 1648.**

Les années à hannetons en décroissance; **Raspail, 1978.**—Maikäferflug 1909; **Wegelin** Mitt. Natf. Ser. Frauenfeld 19 1910 pp. 125-126.

Anthonomus grandis; **Cushman, 539.**—**Pierce, 1893.**—The cotton square-weevil and boll-weevil; **Townsend, 2547.**

Phytonomus murinus, and alfala; **Cook, 479.**

Orchestes fagi; **Trägårdh, 2550.**

Caulophilus latinasus; **Chittenden, 406.**

Calandra granaria; **Guradze** Pflanzer Daressalam 7 p. 86.—*Calandra oryza*; **Hinds, 1069.**

The maize *Sphenophorus*; **Kelly, 1221.**

Borkenkäfer als Kaffeeschädlinge; **Morstatt, 1646.**—*Hylesinus dell'olivo*; **Topi, 2541 & 2542.**—*Myelophilus piniperda*; **Trägårdh, 2553.**—*Clerus formicarius* wirklich ein Vertilger der Larvenbrut; **Prediger, 1940.**

Cacao, *Steirostoma depressum*; **Hall, 996.**

Bruchus affinis an *Lathyrus silvestris* (Russ.); **Smirnov, 2337.**

Leptinotarsa 10-lineata; **Girault, 894.**—Colorado potato beetle, enemy of; **Bethune, p. 320** Canad. Ent. 43.

Phyllotreta nemorum; **Trägårdh, 2554.**

(b) *Hymenoptera*.

Tenthredines nuisibles à la vigne; Loisele, 1435.—Picard, 1881.—Olivier Feuilles jeunes natural 41 p. 66.

Caliroa amygdalina; Cushman, 541.

Eriocampoides limacina; Webster, 2708.

Lophyrus rufus im westlichen Norwegen (Norweg.); Schøyen, 2208.

Lygaeonematus erichsoni; Ruggles, 2118.

Ash *Tomostethus multicinctus*; Sasser, 2155.

Coelopisthia nematocida; Hewitt, 1063.

(c) *Lepidoptera*.

Schädliche Schmetterlinge (Russ.); Torskij, 2544.

Sanninoidea opalescens; Moulton, 1657.

Arctiide dévastatrice de l'orge; Oberthür, 1751.

Oeonistis quadra nella faggeta di Vallombrosa; Cecconi, 384.

Lasiocampa pini; Eckstein, 655.

Malacosoma neustria Bekämpfung durch Parasiten (Russ.); Portschesky, 1927.

Dasychira pudibunda Gouv. Charkov (Russ.); Jaroševskij, 1159.

Les chenilles de la Browntail moth exportation et non-exportation; Vuillet *Insecta* pp. 20–25.

Porthesia chrysorrhoea in Südrussland (Russ.); Kurdiumov, 1330.

Lymantria monacha Bekämpfung; Sedlacek, 2250.—*Lymantria monacha* Klima und Massenvermehrung; Zederbauer, 2792.—*Ocneria monacha* (Russ.); Polovnikov, 1909.—Die Nonne; Herrmann, 1055.—Tote Nonneneier; Escherich, 705.—Nonnen-Tachine *Parasetigena segregata*; Timaeus, 2532.—*Lymantria monacha*, Polyederkrankheit; Wahl, 2681.

Zeuzera pyrina, forêts de chênes-lièges; Lesne, 1412.—Britton J. Econ. Ent. 4 p. 298.

Arbela dea, Cacao; Docters van Leeuwen, 602.

(N-9186 j)

Solenobia triquetrella; Lüstner, Weinbau Mainz 29 p. 187.—Ein Doppelpilgänger des Heu- und Sauerwurmes *Solenobia triquetrella*; Lüstner Geisenheim Ber. Lehranst. Obstbau 1910 1911 pp. 152–153.

Agrotis segetum (Russ.); Miller, 1605; Sumakov, 2469.

Aletia argillacea; Skinner, Ent. News 22 p. 415.

Meliana albilinea; Webster J. econ. Ent. 4 pp. 179–184.

Cerina butyrospermi; Vuillet, 2677.

Omphalocera dentosa; Britton, 266.

Pachyzancla bipunctalis; Chittenden, 402.

Hymenia fascialis; Marsh, 1515.

Ephestia cautella; Chittenden, 410; Smyth, 2351.

Chilo simplex; Fletcher, 751.

Cochylis ambiguella und *Eudemis botrana*; Burger & Hausherr Wein am Oberrhein Colmar 7 p. 54.

Cochylis ambiguella; Dewitz Weinbau Mainz 29 p. 99; Fischer Geisenheim Ber. Lehranst. Obstbau 1910 1911 pp. 15–18; Gescher Weinbau Mainz 29 p. 134; Kaas, 1198; Koegler Weinbau Mainz 29 p. 91.—Überwinterung des Sauerwurms im Boden; Koegler Weinbau Mainz 29 p. 291; Koegler Mitt. Weinbau Geisenheim 23 p. 115; Lüstner & Fischer Weinbau Mainz 29 p. 79.—Biologie *Cochylis ambiguella* et *Polychrosis botrana*; Picard, 1884; Schwangart Weinbau Mainz 29 p. 172.—Ennemi de la *Cochylis* de la Vigne, l'*Odynerus chevrieranus*; Picard, 1883.—Destruction de la *Cochylis* de la vigne; Varenne, 2607.—Zahl der Männchen und Weibchen Kleinschmetterlingen der Rebe; Dewitz Weinbau Mainz 29 p. 273.

Eudemis; Marchal, 1506.

Carpocapsa pomonella; Foster, 773; Caesar, 341; in Turkestan, Bekämpfung durch *Pentarthron* (Russ.); Radeckij, 1967 & 1968.—*C. pomonella* and *Graptolitha funebrana* (Swedish); Tullgren, 2565.

Cacoecia costana an Reben, Weinbau und Vogelschutz; Schwangart, 2247.

Nepticula slingerlandella; **Crosby, 527.**

Gracilaria syringella; **Trägårdh, Upps. Prakt. Ent. Stockholm 21 p. 31.**

(d) *Diptera.*

Die Erbsen bewohnenden Dipterenlarven; **Meyere, 1583.**

Lucilia sericata, household pest; **Morse, 1645.**

Lebensweise, *Hylemyia coarctata*; **Rostrup, 2083.**

Larven von *Hydrotaea dentipes* als Vertilger der Larven von *Musca domestica* (Russ.); **Portinskij, 1930.**

Pegomyia brassicae; **Schoene, 2200.**

Dacus oleae; **Berlese, 150, 151; Tomes, 470; Gabriele, 818.**—*D. oleae*; parassiti; **Silvestri, 2297.**—*Opius*, australiano diffuso in Italia contro *D. oleae*; **Berlese, 152.**—Parasites de la mouche des olives en Tunisie; **Marchal, 1508.**

Ceratitis capitata; **Carnes, 363.**

Die Getreidefliegen; **Störmer & Kleine, 2390.**

Oscinis frit und *pusilla* an Mais in Südrussland (Russ.); **Vasiljev, 2608.**

Phytomyza orobanchiae (Russ.); **Podjapoliskij Sel'sk. Saratov 1 p. 11.**—*P. orobanchiae* an *Orobanchia cumana* (Russ.); **Sacharov, 2123.**

(e) *Hemiptera.*

Helopeltis auf *Kamphora*; **Roepke, 2058.**

Piesma capitata, Rübenfelder (Russ.); **Vasiljev, 2609.**

Brachycolus korotnewi, Getreidearten durch, Gouv. Poltava (Russ.); **Kurdiunov, 1332.**

Cicada, è dannosa all'olivo e ad altre piante coltivate; **Guercio, 986.**—Baumwollcikade; **Kränzlin, Pflanze Dar-es-salam 7 p. 76.**

Empoasca mali; **Webster, 2707.**

Stictocephala; **Osborn, 1782.**

Aleyrodes injurious to citrus; **Morrill & Back, 1641.**

(f) *Aphidae.*

Die Blattläuse (Norweg.); **Schøyen, 2210 & 2213.**

Phylloxeriden; **Börner, 196.**

Phylloxera vastatrix, Novotscherkassk (Russ.), **A-v, 1.**—*Phylloxera*, province d'Alger; **Théry, 2519.**—*Phylloxera*, diffusione spontanea; **Grassi e Topi, 927.**

Schizoneura lanigera; **Lohrenz, 1434; Rulickij, 2119:** (Russ.) **Schreiner, 2215.**

Chermiden; **Börner, 195.**

Aphis brassicae; **Herrick, 1054.**—*A. setariae*; **Sanborn, 2133.**

(g) *Coccidae.*

Forstlich wichtige Schildläuse; **Wolff, 2769.**

Researches on scale insects (Japanese); **Kuwana, 1338.**

Scale insect parasitism; **Quayle, 1961.**

Coccidae locomotion; **Quayle, 1960.**

Chrysomphalus en Algérie; **Künckel d'Herculais, 1318.**—*C. dictyospermi* bassin méditerranéen; **Marchal, 1504.**

Diaspis pentagona e gelsicoltura; **Galimberti, 823; Zanon, 2786.**—*Prosopitella berlesii* in Italia contro *D. pentagona*, suoi progressi; **Berlese, 152.**

Citrus mealy bug, natural enemies; **Essig, 706.**

Guerinococcus serratulae, dannoso alle Baccelline; **Guercio, 988.**

Pseudococcus calceolariae; **Garrett, 829.**

(h) *Termitidae.*

Termites et plantes vivantes, influence des tuteurs en bois; **Chaine, 388 & 389.**

Termites of Formosa; injuries done by them; **Ōshima, 1785.**

Termiten am Teakholz; **Schuster, Zs. wiss. Insektenbiol. 7 p. 65.**

California redwood attacked by *Termes lucifugus*; **Parker J. Econ. Ent. 4 pp. 422-423.**

(i) *Orthoptera.*

Pachytillus migratorius, Syr-Darja (Russ.); **Nikoliskij, 1732.**—*P. migratorius* und *danicus* im Gouv. Stavropol (Russ.); **Uvarov, 2597.**

Periplaneta australasiae in Warmhäusern (Russ.); **Boldyrev, 204.**

(k) *Thysanoptera.*

Thrips flava Schr. als Nelkenschädling; Fulmek Zs. Pflanzenkrankh. Stuttgart 21 pp. 276–280.

Euthrips citri; Jones & Horton, 1177.

Euthrips pyri, New York; Parrott Science 34 p. 94.

Phloeothrips oleae, Mezzi contro; Guercio, 983.

(l) *Collembola.*

Collembola, injurious; Theobald, 2511.

Insects and disease; MAN.

Annotated list of the literature on insects and disease for the year 1910; Doane, 600.

Rolle der Insekten als Krankheitsüberträger; Sergeois, 2267.

Übertragung von Krankheiten; Schuberg & Kuhn, 2225.

Musca domestica, disease carrier; Howard.—Du rôle probable de la mouche domestique dans la transmission des *Leishmannia*; Cardamatis & Melissidis Bull. Soc. Pathol. exot. 4 p. 459.

Larven von *Wohlfahrtia magnifica* (Russ.); Volkovič, 2653.

Dermatomiiasi da *Lucilia caesar* e *Sarcophaga carnaria*; Majocchi, 1494 & 1495.

Parasitisme chez l'homme de *Wohlfahrtia magnifica*; Cros, 519.

Myases chez l'homme par les Ectrides; Petrovskaia, 1833.

Glossina, entoparasite of; Bequaert, 137.—*G.*, food; Bruce, 282.—Game and tsetse; Hamilton, 998.—Maladie du sommeil et Glossines au Congo; Martin & Ringenbach, 1520.—Glossines du Haut-Dahomey; Roubaud, 2103.

Larvæ of dipterous insect in the deep urethra and bladder of man; Triple Philippine J. Sci. B. Med. Sci. 5 1910 p. 515.

Homalomyia-Larven beim Menschen (Schwedisch); Reuter, 2022.

Cordylobia anthropophaga; Rodhain & Bequaert, 2054 & 2055.—Larve cubi-

cole africaine de *Cordylobia anthropophaga*; Roubaud, 2108.—*Cordylobia rodhaini*, Infection mit Eiern u. Larven; Pelsär-Berensberg, 1814.

Bloodsucking flies; Sanderson, 2136 & 2137.—Blood-sucking flies, Brit. Guiana; Moore, 1631.—Choeromyies, larves suceuses du sang; Roubaud, 2106.—*Diptera*, Nigeria; Mayer, 1541.

Etudes épidémiologiques et prophylactiques du paludisme; Sergent & Sergent, 2266.

Bionomics of *Anopheles*; Jordan & Hefferan, 1178.

Habitat *Culicidae* larvae, etc.; Graham, 919.

Culicidae, breeding places; Wise, 2765.

Influence des vents dominants sur le développement des larves de *Culex* et d'*Anopheles*; Fossey, 772.

Beobachtungen über *Culiciden*; Galli-Valerio & Rochaz de Jongh, 824.

Malaria and *Nyssomyzomyia rossi*; Bentley, 136.

Paludisme et anophélines à Hagiang; Mathis & Léger, 1533.

Culicides de Cochinchine; Broquet Paris Bul. soc. path. exot. 4 p. 395.

Mosquitos in New-York State; Felt, 741.

Stegomyia fasciata; Theobald, 2512.

Dengue et *Stegomyia*; Legendre, 1377.

Culicides destruction; Dyé & Jumentié, 649.

Anopheles in den Reisfeldern Turkestans Bekämpfung durch Fische (Russ.); Vasiljev, 2614.

Myzomyia rossii as a malaria-carrier; Vogel, Philippine J. Sci. B. Med. Sci. 5 1910 pp. 277–283.

Lotta contro *Culicidae* nello Stato di New-York; Caccini, 338.

Mosquitos and fish; Morris, 1643.

Phlebotomus; Newstead, 1717.—*Phlebotomus*, Malta; Marett, 1513.

Pathology of the brown-tail moth dermatitis; Tyzzer, 2586.

Tabanidae as infecting agents; Bruce, Hamerton & Bateman, 281.

La spirillose nord-africaine et sa transmission par les poux; **Sergent, Gillot & Foley, 2264.**

Ceratophyllus silantiewi, a plague-flea; **Rothschild p. 141 Ent. Mag. 47.**

Stich von *Ectomocoris* (Russ.); **Panov, 1794.**

Veleno delle vespe e dei calabroni; **Perroncito, 1830.**

Animals, attacks on.

Tropical veterinary entomology; **Mitzmain, 1611.**

Hypoderma and cattle; **Carpenter, 364.**—Développement *Hypoderma bovis*; **Vaney, 2603.**—Der Dasselplage; **Schenkling, 2172.**—Pourcentages et qualités de peaux attaquées par les larves de l'hypoderme du bœuf; **Lehmann & Vaney, 1378 & 1379.**

Calliphorinae, attacking animals; **Geddoelst, 835.**

Flies, with cattle; **Gravely, 929.**

Bee culture.

Ueberwintern in der Erde (Russ.); **Aleksandrov, 20.**—Biologie und Psychologie (Russ.); **Brüchonenko, 269.**—Neues System gegen das Schwärmen (Russ.); **Čaikin, 342.**—Bee-disease; **Fantham & Porter, 717.**—Schliessliche Befruchtung einer drohenbrütigen Weibchens (Russ.); **Kandinova, 1199.**—Einfluss des Alters des Königin auf das Ueberwintern (Russ.); **Richter, 2033.**—Uebertragen der Eier von einer Wabe zur anderen (Russ.); **Silin, 2296.**—**Sněžnevskij, 2352.**—Nutzen der Bienen durch Verscheuchen schädlicher Insekten von den Zuckerrüben (Russ.); **Vasiljev, 2610.**

Silk.

Opera della Stazione bacologica di Padova in favore della Gelsicoltura e Bachicoltura; **Verson, 2621.**—Seidenraupenzucht im Norden (Russ.); **Bertenson, 164.**—Sericulture au Japon; **Ishiwata, 1143.**—Wild silk worms of Japan; **Fukai, 813.**—Selezione delle uova di *Sericaria mori*; **Tomaselli, 2537.**—Aufzucht der Siedenraupen mit Schwarzwurzelblättern; **Thiele, 2523.**—Maladies des vers à soie; **Broquet & Villeneuve, 275.**

STRUCTURE.

General.

Mouth, morphology of; **Janet, 1158.**

Innere und äussere Anatomie der *Protura* (Russ. + deutsch. Rés.); **Rimsky-Korsakow, 2037** & Organisation der *Protura*; **Trägårdh, 2551.**

Bathysciinae, Morphologie; **Jeannel, 1160.**

Bau der Biene; **Zander, 2785.**

Morphologie und Phylogenie, *Formica sanguinea*; **Viehmeier, 2632.**

Aulacus striatus, Anatomie; **Bugnion, 303.**

Termes ceylonicus, anatomy; **Bugnion, 307.**

Trigonalys hahni, Anatomie; **Bugnion, 302.**

Phlebotomus, anatomy; **Newstead, 1717.**

Morphologie larvaire des *Phora*; **Keilin, 1212.**

Structure of a Phoridae from New South Wales; **Lea, 1364.**

Larvae of Donaciinae; **Böving, 197.**

Anatomie und Histologie Larve *Sisyra fuscata*; **Lampe, 1352.**

Larve von *Heptagenia sulphurea*; **Leue, 1416.**

Larve von *Simulia*; **Liebe, 1423.**

Verschiedene Organe bei den *Suctorioria*; **Oudemans, 1787.**

Ceratophyllus vagabundus; **Dampf, 549.**

Of Outer Parts.

Bau und Funktion der Dorsalkeule, *Corynephoria jacobsoni*; **Hoffmann, 1082.**

Feineren Bau der Cuticula; **Kapzov, 1200.**

Scales of *Thermobia*; **Strachan, 2391.**

Segmentation de l'abdomen, *Cara-bini*; **Vuillet, 2668.**

Schädelbildung Eudermaptera; **Zacher, 2782.**

Homologies and mechanism of mouth-parts, *Hemiptera*; **Muir & Kershaw, 1673.**

Les pièces buccales des *Hemiptères*; **Bugnion et Popoff**, 309.

Trophi and pharynx, paralabial organs, *Creophilus*; **Bugnion**, 306.

Schnellapparates der Elateriden; **Scholz**, 2201.

Tarse des Dytiscides; **Chatanay**, 401.

Thoracic eye-spots, *Alaus*; **McDer-mott**, 1485.

Brennhaare der Spinnerraupen; **Linstov**.

Nackengabel der Papilioniden-raupen; **Schulze**, 2236 & 2237.

Bau der Cerci bei *Poecilimon* (Russ.); **Ščelkanovcev**, 2158.

Bau und Funktion des Duftorgans *Hepialus*; **Deegener**, 562.

Abdominalen Duftorgane der männlichen SpHINGEN und Noctuiden; **Stobbe**, 2338.

Geschlechtsdimorphismus, Schmetterlinge; **Borggreve**, 227.

The flying apparatus of the blow-fly; **Ritter**, 2051.

Wings; **Navás**, 1687.

Der morphologische Geschlechtsdimorphismus der Schmetterlingsflügel; **Linstov**, 1431.

Flugorgane der Hornis; **Gröschel**, 955.

Der Dorn auf dem Flügel der Saturniidae; **Jordan, Kheil, Grosse, Pieck & Jasch**, 1188.

Pupillenförmige Organe, Flügeln, Panorpiden; **Navás**, 1693.

Verlauf der Adern u. Bau des männlichen Genitalapparats bei den *Abraxas*-Arten (Russ. + engl. Rés.); **John**, 1172.

L'imago du *Coptotermes flavus*, Larves portant des rudiments d'ailes prothoraciques; **Bugnion & Ferrière**, 308.

Bau der chitinösen Teile bei den Larven der *Hymenoptera parasitica* (Russ.); **Ševyrev**, 2271.

Bau der Larven von *Hydrotaea dentipes*, *Polytes albolineata*, *Mesembrina mystacea*, *Musa domestica* (Russ.); **Porčinskij**, 1930.

Experimentelle Untersuchungen über vitale Färbung der Mikrolepidopteren-raupen; **Sitowski**, 2320.

Acussere Merkmale der Gattung *Calopteryx* (Russ.); **Bartenev**, 109.

Nervous System and Sense Organs.

Sistema nervoso; **Monti**, 1630.

Nervous system, *Corydalis* larva; **Hilton**, 1068.

Bau des sensiblen Nervensystems bei *Aeschna* und *Melolontha* (Russ. + deutsch. Rés.); **Zavarzin**, 2787.

Das Gehirn der Ameise; **Pietschker**, 1897.

Organes sensitifs, larves de Diptères; **Hellin**, 1040.

Organe chordotonal et vésicule pulsatile antennaire chez l'Abeille, morphologie de la tête; **Janet**, 115.

Antennalen Sinnesorgane, Lepidopteren; **Böhm**, 194.

Das Facettenauge der Lepidopteren; **Johnas**, 1173.

Das Facettenauge der Wasserwanzen; **Bedau**, 126.

Bau und Entwicklung des tibialen Chordotonalorgans; **Schön**, 2199.

Abdominale Sinnesorgan und Gehörsinn der Lepidopteren; **Stobbe**, 2387.

Innervierung der Schmetterlingsflügel, und Bau und Verbreitung der Sinnesorgane; **Vogel**, 2650.

Bi-lobing of eyes *Epheméridae*; **Roberts**, 2053.

Myology.

Insertion der Muskeln am Chitinskelett (Russ. + deutsch Rés.); **Törne**, 2535.

Alimentary Canal.

Anatomie und Histologie des Darmkanals der Schmetterlinge; **Petersen**, 1832.

Appareil digestif et tubes de Malpighi, larves de Lépidoptères; **Bordas**, 219, 220, 222.

Das Mitteldarmepithel der Insekten-larven während der Häutung; **Braun**, 251.

Tubes de Malpighi, Homoptères; **Lesne, 1400.**

Malpighischen Gefäße, Myrmeleonenlarven, als Spinndrüsen; **Loziński, 1441.**

Dilatation proventriculaire, Homoptères; **Licent, 1422.**

Proventriculus; **Ramme, 1977.**

Darmkanal der Imago und Larve, *Dytiscus*; **Rungius, 2121.**

Respiratory & Circulatory Systems.

Respiration des insectes aquatiques; **Brocher, 274.**

Tracheenverlauf Eosentomiden; **Prell, 1945.**

Respiration Tracheensystem und Schaumproduktion Aphrophorinae-Homoptera; **Sule, 2468.**

Dytiscidae spiracles; **Brocher, 272.**

Stigmi di *Sericaria mori* allo stato inerte; **Verson, 2622.**

Vaso pulsante di *Sericaria mori*; **Verson, 2620.**

Das Herz der *Aeschna*larven; **Zawarzin, 2791.**

Glands and Cells. Blood.

Glandes céphaliques des larves des Lépidoptères; **Bordas, 223.**

Cæcum intestinal et glandes rectales, Lépidoptères; **Bordas, 221.**

Glandes labiales des Hydrocorises; **Fauré-Frémiet, 721 & 722.**

Glandes labiales, *Lethocerus cordofanus*; **Fauré-Frémiet, 720.**

Salivary glands and syringe, *Hemiptera*; **Kershaw, 1227.**

Salivary glands, *Chironomus*; **Bolius, 209.**

Kernfaden und Nucleolus Speicheldrüsenkernen, *Chironomus*larve; **Herwerden, 1056.**—Kerne in den Speicheldrüsen der *Chironomus*larve (Holländisch); **Herwerden, 1057.**

Silk glands, *Bombyx mori*; **Tanaka, 2503.**

Pulvinaria: femmina glandule ceripare; **Teodoro, 2506.**

Glandule del De Filippi *Sericaria mori*; **Verson, 2623 & 2666.**

Drüsenzellen, Lepidopteren; **Stendell, 2374.**

Bau und Histologie der Stinkdrüsen von *Aromia moschata* (Russ. + d. R.); **Smirnov, 2338.**

Drüsenzellen innerer Secretion; **Verson, 2629.**

Häutung und der Häutungsdrüsen, *Bombyx mori*; **Verson, 2630.**

Sang des Insectes à hémorrhée et des Insectes sans hémorrhée; **Holland, 1090.**

Reproductive Organs. Egg.

Caractères sexuels externes des Chrysalides; **Levrat, 1419.**

Versonsche Zelle, Prioritätsfrage; **Verson, 2628.**

Bau der Copulationsorgane der männlichen Staphyliniden; **Weber, 2705.**

Penis der Borkenkäfer; **Fuchs, 811.**

Anatomie und Histologie des männlichen Geschlechtsapparates von *Bombus*; **Pavlovskij, 1805.**

Male genitalia *Lep.*; **Chapman, 396; McDunnough, 1487.**

Männlichen Geschlechtsapparates, Trichopteren; **Cholodkowsky, 415.**—Männliche Geschlechtsorgane von *Limnophilus* (Russ.); **Cholodkovskij, 413.**

Male armature, *Glossina*; **Newstead, 1716 & 1720.**

Parameren der *Caraboidea*; **Netolitzky, 1708 & 1719.**

Morphologie des weiblichen Geschlechtsapparates, *Hydrophilus piceus* (Ungarisch); **Gróf, 956.**

Female genital organs, *Camponotus ligniperda* (Hungarian); **Szabó, 2494.**

Appareil ovarien des *Cochylis*; **Maisonneuve, 1492.**

Die Ovarien *Bacillus rossi*; **Wanach Berliner ent. Zs. 56 SitzBer. p. 39.**

Egg follicle in anophelines; **Christophers, 426.**

Feineren Bau einer Zwitterdrüse; **Kopeč, 1289.**

Eizahl im Eierstocke; **Jablonowski, 1144.**

Eggs of *Hemiptera*; **Heidemann**, 1022.

Ei-Beschreibungen *Agrotis castanea*, *comes*, *depuncta*, *Coscinia cribrum*, *Epizeuxis calvaria*; **Richter**, 2034.

Eier, Schmetterlinge; **Linstow**, 1433.

PHYSIOLOGY.

General and Miscellaneous.

Physiologie des Insectes; **Marchal**, 1511.

Recherches physiologiques sur les Insectes aquatiques; **Portier**, 1924.

Lebensgewohnheiten, Bewegungen, Nahrung der *Protura*; **Rimskij-Korsakov**, 2037.

Biologie et la viviparité pœcilogonique *Musca corvina*; **Roubaud**, 2102.

Larve de *Bombyx mori*, physiologie; **Polimanti**, 1906.

Azione dell' elettricità sulle uova di *Sericaria mori*; **Quajat**, 1957.

Azione di basse temperature sulle uova di *Sericaria mori* appena deposte ed immediatamente elettrizzate; **Quajat**, 1956.

Influence des rayons Roentgen sur les chrysalides; **Reverdin**, 2029.

Nessuna influenza esercita il Radio sulle manifestazioni vitali di *Sericaria mori*; **Tomaselli**, 2536.

Lebensfähigkeit; **Fleur Bull. Soc. Metz** 27 pp. 111-117.

Longévitè; **Laboissière**, 1344.

Lebensdauer Weibchens der *Dixippus morosus*; **Meissner**, 1550.

Lebensdauer von *Cybister lateralis marginalis*; **Tunkl Intern. ent. Zs.** 5 p. 86.

Lange Lebensdauer, verzögerter Entwicklung; **Wanach Berliner ent. Zs.** 56 SitzBer. pp. 1-2.

Fécondité des *Cochylis*; **Maison-neuve**, 1491.

Parthenogenesis. Viviparity.

Parthenogenesis, *Heliothrips*; **Buffa**, 301.

Parthenogenesis, with ♂ offspring; **Sanders**, 2134.

La spanandrie et l'oblitération de la reproduction sexuée chez les Chermes; **Marchal**, 1509.

L'oblitération de la reproduction sexuée chez le *Chermes piceae*; **Marchal**, 1510.

Parthenogenese bei *Melittobia acaste* (Russ. + deutsch. Rés.); **Malyšev**, 1496.

Parthenogenesis, *Neuroterus*; **Doncaster**, 610.

Lymantria dispar, Ausfall der Di-genese; **Fritzsche**, 796.

Miastor; larvae; **Felt**, 743.

Miastor; paedogenesis; **Felt**, 742.

Viviparity, *Lepidoptera*; **Pierce**, 1890.

Cycles of generations.

Cycles of generations, *Phylloxerinae*; **Grassi & Foa**, 925.

Le cycle hétérogonique de *Pterocallis liliae* Linné et la présence de la chlorophylle; **Sémichon**, 2260.

Aphidologische Mitteilungen; **Cholodkovsky**, 414.

Sex.

Beziehungen des Chromatins zur Geschlechtsbestimmung (Russ.); von **Baehr**, 77.

Determination of sex; **Doncaster**, 610.

Sex determination, *Stenobothrus*; **Meek**, 1547.

Determinazione del sesso, *Apis* Imenotteri; **Emery**, 672.

Entstehen von Drohnen aus befruchteten Eiern; **Buttel-Reepen**, 333.

The effects of parasitic castration in insects; **Brindley & Potts**, 264.

Parasitic castration in *Membracidae*; **Matausch**, 1532.

Der morphologische Geschlechtsdimorphismus der Schmetterlingsflügel; **Linstow**, 1431.

Hermaphroditism.

Gynandromorphe Makrolepidopteren; **Schultz**, 2229 & 2230.

Gynandromorphic *G. rhamni*; **Scorer p. xxv P. ent. Soc. London** 1911;

Lycaena argus, gynandromorphes; **Hellweger, 1041.**

Gynandrous *Lycaena icarus*; **Hammond p. 273 Entomologist 44.**

Polyommatus virgaureae ♂ mit ♀ Duftapparat ?; **Locher Ent. Zs. Frankfurt 25 p. 208.**

Zwitter, *Smerinthus populi*; **Arnold, 39.**

Bau einer Zwitterdrüse *Lymantria*; **Kopeć, 1289.**

Zwitter, *Oeonistis quadra*; **Schmidt Zs. wiss. Insektenbiol. 7 p. 323.**

Stacheldrohne; **Buttel, 332.**

Larven-Hermaphroditismus, *Icerya purchasi*; **Pierantoni, 1858 & 1859.**

Senses.

Senses; **Sherman, 2287.**

Funktionen des Zentralnervensystems; **Matula, 1537.**

Sehleistung des Facettenauges; **Best, 166.**

Cours de l'inanition à la lumière et dans l'obscurité chez *Tarabus morbillosus*; **Fatta & Mundula, 719.**

Blow fly larvae and gravity; **Mast, 1531.**

Colour-vision, honey bee; **Turner, 2573 & 2574.**

Phototactic reactions and their reversal, nymphs *Heptagenia interpunctata*; **Wodsedalek, 2767.**

Functions, Various.

Physiologische, Kaumagens, *Dytiscus*; **Rungius, 2120.**

Funktion von Hautdrüsen des Hinterleibs (Russ.); **Levenec, 1418.**

Wirkungsweise der Mundwerkzeuge bei Seidenraupen; **Jordan, 1179.**

Blutzirkulation *Ranatra*; **Leontowitsch, 1395.**

Secrezione della cera in maschi di *Pulvinaria camelicola*; **Teodoro, 2507.**

Wachs der Hummeln; **Sundwik, 2474.**

Propolis; **Küstenmacher, 1320.**

Fluorescence chez les Insectes lumineux; **Dubois, 622.**

Fluorescenz an den Augen; **Hess, 1059.**

Schlüpfen der Stechmücke; **Eysell, 714.**

Locomotion.

Flug der Käfer (Ungarisch); **Lovas, 1438.**

Flight-function, *Bombyx mori*; **McCracken, 1484.**

Flying blow-fly; **Ritter, 2051.**

Hydrostatic mechanism *Corethra* larva; **Krogh, 1315.**

Metabolism, Excretion.

Stoffwechsel der Bienen zu verschiedenen Jahreszeiten (Russ.); **Širokich, 2318.**

Digestion phagocytaire des chenilles; **Portier 1925.**

Diastases digestives, Coléoptères; **Bounoure, 232.**

Funktion der Darmzellen; **Jordan, 1180.**

Proventriculus; **Ramme, 1977.**

Activité peroxydasique du sang et des tissus; **Fleig, 746.**

Rôle des microbes dans les voies digestives; **Wollmann, 2771.**

Relation of food to reproductive activity and longevity, hymenopterous parasites; **Doten, 617.**

Natur und Herkunft des „milchigen Secrets“ am Prothorax des *Dytiscus*; **Blunck, 193.**

Phénomènes sécrétoires, glandes filières des larves des Lépidoptères; **Maziarski, 1542.**

Respiration.

Atmung; **Regen, 1987.**

Respiration, *Haemonia* and *Donacia*; **Brocher, 270.**

Respiration *Dytiscidae*; **Brocher, 272.**

Die Respiationsverhältnisse bei unter dem Eise überwinternden Wasserinsekten; **Wesenberg-Lund, 2723.**

Bedeutung der Hautatmung; **Haregawa, 1013.**

Einfluss des Kohlensäuregehaltes der Atemluft; **Linden, 1426.**

Gaswechsel der Schmetterlingspuppen; **Buytendijk, 337.**

Pigment, Colour.

Studies on melanin: *Leptinotarsa decemlineata*; **Gortner, 903.**

Entwicklung der Raupenzeichnung; **Voss, 2659.**

Einfluss des Raupenfutters auf die Färbung der Falter; **Hamann** Berliner ent. Zs. **56** SitzBer. pp. 33-34.

Environmental. Adaptation.

Einwirkung äusserer Einflüsse auf Schmetterlinge; **Kosminsky, 1296.**

Experimente an überwinternden Lepidoptera-Puppen; **Reiff, 1997.**

Wärmesucht und Wärmeflucht, Arctidenraupen; **Rothke** Zs. wiss. Insektenbiol. **7** p. 288.

Insektenarmut infolge dürrer Sommer; **Fassl** Ent. Zs. **25** p. 156.

Auffällig kleine Falter im Sommer 1911; **Linstow** Intern. ent. Zs. **5** p. 265.

Regeneration.

Regeneration, Embiiden; **Rimsky-Korsakoff, 2039.**

Regeneration der Vorderflügel und des Tonapparates *Gryllus campestris*; **Regen, 1988.**

Flügelregeneration *Lymantria*; **Ubisch, 2587.**

Regenerationsfähigkeit der Insektenflügel; **Meisenheimer, 1549.**

Kastration und Transplantation, Schmetterlingen; **Kopeć, 1288.**

Chemical.

Chemische Zusammensetzung der Bienen; **Straus, 2455.**

Red secretion of *Timarcha*; **Carlier & Evans, 362.**

Enzimi degli Insetti; **Sandias, 2139.**

DEVELOPMENT.

General.

Development, *Tiphia femorata*; **Adlerz, 6.**

Entwicklungsgeschichte der Collembolen; **Hoffmann, 1081.**

Influence of Röntgen rays; **Hasebroek, 1012.**

Chromosomes oögenesis, fertilization and cleavage, Coreidae; **Morrill, 1642.**

Chromosomes, *Acholla*; **Payne, 1806.**

Gametogenesis *Neuroterus*; **Doncaster, 610.**

Germ cell determinants eggs of Chrysomelidae; **Hegner, 1020, 1021: Wieman, 2751.**

Germ cells of *Leptinotarsa* with bibliography; **Wieman, 2749.**

Chromosomes of *Nezara*; **Wilson, 2761.**

Chromosomes, number of, and species; **Browne, 279.**

Oogenesis. Spermatogenesis.

Oogenesis, *Dytiscus*; **Debaisieux, 561** (Polish); **Majowska, 1493.**

Reduction in *Aphis*; **Stevens, 2376.**

Pole disc of Chrysomelid eggs; **Wieman, 2748.**

Amitosis ovary of *Protenor bellifragei*, chromatin nucleolus; **Foot & Strobell, 754.**

Egg follicle in Anophelines; **Christophers, 426.**

Spermatogenesis *Ceuthophilus*, with special reference to the accessory chromosome; **Thompson, 2525.**

Spermatogenesis *Acridiidae* and *Locustidae*; **Davis, 551.**

Spermatogenesis, *Gryllus*; **Brunelli, 288.**—In *Trypialis nasuta*; **Brunelli, 289.**—In *Gryllotalpa*; **Senna, 2262.**—In *Stenobothrus*; **Gerard, 838 & Meek, 1547.**—In *Euchroma*; **Nichols, 1724.**—In *Platyphylax*; **Lutman, 1468.**—In *Euschistus*; **Montgomery, 1629.**

Structure spermatophores of crickets; **Jensen, 1163.**

Degenerated cells in the testis of *Leptinotarsa*; **Wieman, 2750.**

Fertilisation.

Guscio e sue impronte superficiali dell' uovo di *Sericaria mori*; **Verson,**

2625.—Mancata colorazione nelle uova fecondate di *Sericaria mori*; **Verson, 2627 & 2624.**

Embryology.

Pristhesancus papuensis, embryology; **Muir & Kershaw, 1674.**

Apanteles glomeratus, embriologia **Grandori, 922.**

L'apparition des initiales génitales chez le *Bombyx mori*; **Vaney & Conte, 2605.**

Bildung der Geschlechtszellen bei den *Aphididae* (Russ.); von **Baehr, 77.**

Bedeutung der Cölomhöhlen; **Faussek, 723.**

Experiments with chrysomelid beetles; **Hegner, 1018.**

Effects of killing parts of the eggs of *Leptinotarsa*; **Hegner, 1019.**

Production expérimentale de Lépidoptères acephales; **Conte & Vaney, 478.**

Artificial production of multivoltine races of silkworms; **Abbott, 2.**

Bau und Entwicklung des tibialen Chordotonalorgans; **Schön, 2199.**

Entwicklung der Geschlechtsorgane, *Chironomus*; **Hasper, 1014.**

Hatching of *Diapheromera femorata*; **Severin, 2268.**

Embryo of silkworms hybernation (Japanese); **Takahashi, 2502.**

Développement de l'œuf univoltin du ver à soie; **Vaney & Conte, 2604.**

Postembryology, Metamorphosis.

Postembryonale Entwicklung der *Protura*; **Rimskij-Korsakov, 2037.**

Die schuppenlosen Entwicklungsstufen und die Orthomorphose; **Verhoeff, 2615.**

Influence of changed external conditions on the development of moths; **Montgomery, 1628.**

Beiträge zur Kenntnis Postembryonalen Entwicklungsgeschichte der Genitalorgane, Lepidopteren; **Zick, 2793.**

Corps gras de l'*Hyponomeuta*; **Hufnagel, 1130.**

Métamorphose de la musculature, Lépidoptères; **Nordenskiöld, 1736.**

Métamorphose musculaire, *Polistes*; **Pérez, 1822.**

Muskeldegeneration; **Thulin, 2527.**

Veränderungen an den Muskeln und dem benachbarten Epithel während der Verwandlung (Russ. + deutsch. Rés.); **Törne, 2535.**

Disques imaginaires des pattes *Phytonomus*; **Pérez, 1822.**

Beurteilung der Insektenpuppe; **Deegener, 563.**

Prothételie; **Peyerimhoff, 1838.**

Larves portant des rudiments d'ailes prothoraciques; **Bugnion & Ferrière, 308.**

A quiescent stage in the development of *Termes flavipes*; **Strickland, 2459.**

Lydus viridissimus sa larve primaire; **Cros, 523.**

Mœurs et métamorphoses des Chrysoméliens; **Xambeu, 2775.**

Development of the Carabidae; **Böving, 198.**

Natural history of the larvae of Donaciinae; **Böving, 197.**

Danish larvae of Elateridae (Danish); **Henriksen, 1050.**

Metamorphose von *Odynerus*, *Chrysis*, *Melittobia* (Russ. + deutsch. Rés.); **Malyšev, 1496.**

Metamorphose der *Hymenoptera parasitica* (Russ.); **Sevyrev, 2271.**

Häutung und der Häutungsdrüsen, *Bombyx mori*; **Verson, 2630.**

Dorsal glands at the time of moulting of silkworms (Japanese); **Ikeda, 1135.**

Five moults of silkworms, cause of (Japanese); **Niwa, 1734.**

Die Entwicklung der Raupenzeichnung Sphingiden; **Voss, 2659.**

Schnelle Wachstum Cucullien-Raupen; **Srdinko Intern. ent. Zs. 5 p. 51.**

Chiraxes-raupen; **Martin, 1522.**

Versuche über Goldpuppenbildung bei *Vanessa urticae* und *Vanessa io*; **Mensik, 1560.**

Verpuppung, *Cossus* (Schwedisch); **Dahlgren, 545.**

Entartetes Gespinnst von *Saturnia pavonia*; **Schneider Intern. ent. Zs. Guben 4 p. 237.**

Ueberliegen der Schmetterlingspuppen; **Gauckler** Ent. Rdsch. **28** p. 145.—Bemerkung dazu, *Papilio machaon* betr. v. **Kathariner** *l.c.* p. 168.

Wie Saturniiden den Kokon durchbrechen; **Kheil**, **1233**.

Unentwickelte Falter; **Wormsbacher** Zs. wiss. Insektenbiol. **7** p. 255.

Ein verkehrt in der Puppenhülle liegender Falter, *Depressaria*; **Mitterberger** Verh. z.-b. Ges. Wien **61** p. 156.

Morphologisches und Kinematisches vom Ende des Embryonalstadium der Geradflügler; **Voss**, **2658**.

Ecdysis Diptera; **Knab**, **1280**.

Caironomidenmetamorphosen; **Kraatz**, **1298** & **1299**.

Dipteren-Larven und Puppen; **Vimmer**, **2644**.

Schlüpfen der Stechmücke; **Eysell**, **714**.

Parasites of *Simulium* larvae, effects on the development of the host; **Strickland**, **2456**.

Life-histories, *Syrphidae*; **Metcalf**, **1568** & **1569**.

Développement *Hypoderma bovis*; **Vaney**, **2603**.

Dégénérescence de formes larvaires de *Hypoderma bovis*; **Vaney** & **Tainurier**, **2606**.

Calliphora erythrocephala; **Krausse** Zs. wiss. Insektenbiol. **7** p. 28.

Persistence of bacilli during metamorphosis; **Bacot**, **76**.

ETHOLOGY.

Vide etiam Economic, p. 128.

General and Miscellaneous.

Bilder aus der Insektenwelt Uebersetzung; **Fabre**, **715**.

Social organisations, laws of; **Göldi**, **898**.

Literature for 1910 on the behaviour of spiders and insects other than ants; **Turner**, **2576**.

Biologisches über südafrikanische Hymenopteren; **Brauns**, **256**.

Phänologie, Lebensweise, Nährpflanzen etc. im Gouv. Charkov (Russ.); **Jaroševskij**, **1159**.

Biologische Beobachtungen an Insekten im Gebiet der Donschen Kosakin (Russ.); **Zykoff**, **2799**.

Utilisent leurs déjections; **Coupin**, **504**.

Oekologie und Sammeltechnik der terricolen Coleopteren; **Holdhaus**, **1085**.

Verhalten der Schmetterlinge bei starkem Winde im Hochgebirge; **Mitterberger** Ent. Jahrb. **21** pp. 101–106.

Wie und wo nächtigen die Tagfalter?; **Hoffmann**, **1080**.

Sleeping habits of *Heliconius*; **Fontaine** p. 403 Entomologist **44**,

Netzspinnende, Trichopterenlarven; **Wesenberg-Lund**, **2722**.

Biologische Gruppen Orthopteren; **Puschign**, **1953**.

Bruchidae, host plants and parasites; **Crishman**, **540**.

Deux notices biologiques (Polish); **Dziędzielewicz**, **652**.

Épizootie bactérienne, sauterelles du Mexique; **Hérelle**, **1051**.

Ant-life.

Donisthorpe; **611**: **Wasmann**, **2665**.

Wanach, **2690**.

Ants and their ways, (popular); **Willis** pp. 53–63 Rep. Manchester Microsc. Soc. **1910**.

Literature for 1910 on the behaviour of ants; **Wheeler**, **2728**.

The ant-colony as an organism; **Wheeler**, **2729**.

Der Ameisenstaat; **Goeldi**, **897**.

Geologic work of ants in tropical America; **Branner**, **249**.

Division of labor; **Buckingham**, **298**.

Gesellschaftsleben der Ameisen (Schwedisch); **Holmgren**, **1096**.

Symbiosis between acacias and ants (Swedish); **Sjöstedt**, **2327**.

Ameisen und Pflanzen; **Escherich**, **704**.

Javanische *Myrmecodia*, Beziehung zu Ameisen; **Miehe**, **1600**.

Ameisen-Pflanzen (Ungarisch); **Szilády**, **2499**.

Ameisen in Nestern centralasiatisches Termiten; **Vasiljev**, 2611.

Termiten und Ameisen; **Prell**, 1946.

Künstliches Ameisennest; **Krausse** Natw. Wochenschr. Jena 26 pp. 133-135.

Erdhügelbildung durch Ameisen auf Weiden in Ost-Galizien; **Lubicz-Niezbittowski**, 1442.

Fondazione di formicai; intolleranza e fratellanza fra formiche; **Emery**, 677.

Aphaenogaster sardoa; **Krausse**, 1304.

Nestbau von *Monomorium salomonis*; **Karavajew**, 1203.

Ueber Kartonnester von *Cremastogaster scutellaris* auf Sardinien; **Krausse**, 1306.

Slave-making ant, Japan; **Yano**, 2779.

Beobachtungen an Ameisen; **Reichensperger**, 1994.

Parasitism and slavery; **Donisthorpe**, 616.

F. sanguinea slaveless colony; **Forel**, 760.

Polyergus rufescens; **Emery**, 671.

Eine Ameisenschlacht; **Klossowski**, 1278.

Le transport des ouvrières chez les fourmis moissonneuses; **Bouvier** Hommage à Louis Olivier Paris 1911 pp. 41-43.

Messor barbara; **Bouvier**, 241.

Ants granary; **Fraser J.** Bombay Soc. 20 p. 877.

Fungus-growing ants, habits; **Wheeler**, 2736.

Koloniegründung, künstlicher Pleometrose, *Camponotus ligniperda*; **Schmitz**, 2195.

Psychologie, Ameisen; **Ernst**, 701.

Orientation; **Cornetz**, 493.

Orientation; **Santschi**, 2151.

Trajets de la Fourmi; **Cornetz**, 490.

Remplacement de l'axe du corps; **Cornetz**, 492.

Retour au nid; **Cornetz**, 491, 494, 495.

Zwei sich kreuzende Ameisenstrassen; **Krausse** Intern. ent. Zs. 5 p. 163.

Phototropismus, *Lasius niger*; **Poli-manti**, 1907.

Zirplaute; **Krausse** Zs. wiss. Insektenbiol. 7 p. 359.

Polyandrie; **Santschi**, 2142.

Hochzeitsflug und Hybridation; **Viehmeyer**, 2631.

Nahrung der Ameisenlarven, die Entwicklung des temporären Parasitismus; **Emery**, 675.

Erbliche Instinktmodifikationen Ameisen gegenüber Gästen?; **Wasmann**, 2701.

Myrmecophilous, Mexico; **Silvestri**, 2305.

Ant-guests; **Wasmann**, 2696.

Atemeles and ants; **Wasmann**, 2697.

Ants and their guests; **Mann**, 1500.

Guests of some Californian ants; **Mann**, 1499.

Myrmecophilous Ins., Britain; **Donisthorpe**, 613.

Trichonyx sulcicollis and *maerkeli*; **Donisthorpe** p. 67 Ent. Mag. 47.

Lasius, parasites of; **Crawley** p. 22 Ent. Rec. 23.—*L. niger*, *Aphidae* with; **Id. T.c.** p. 23.

Lasius mixtus, parasites; **Donisthorpe**, 614.

Adoption of *Lasius*, *Formica* and *Polyergus* queens by alien species; **Tanquary**, 2504.

Myrmecophile Culicide; **Jacobson**, 1150.

Gargara genistae und *Formica cinerea*; **Enslin**, 698.

Pediopsis nana nourricière de fourmis; **Bergevin**, 139.

Symbiose des fourmis et des chenilles de *Lycaena*; **Powell**, 1939.

Relations des Lycénides et des Fourmis; **Oberthür**, 1748.

Ameisen und Ameisenlöwen; **Meissner**, 1553.

Uebersicht über die Paussidenwirte; **Wasmann**, 2700.

Neue *Myrmecophila*, neue Fundorte und Wirtsameisen; **Schimmer**, 2178.

Bee-life.

Die Biologie der Biene; **Stadler**, 2365.

Geometrie und Ökonomie der Bienenzelle; **Vogt**, 2651.

Are bees reflex machines? Translated; **Buttel-Reepen**, 335.

Alte und neue Lehre im Vergleich; **Dickel**, 575.

Entstehen von Drohnen aus befruchteten Eiern; **Buttel-Reepen**, 333.

Über Dzierzon; **Dickel**, 576.

Nestgeruch bei den Bienen?; **Ludwig** Leipzig Bienenztg. 26 p. 131.

Some experimental observations concerning the Bees' visits to cotton blossoms; **Allard**, 23.

Folgt die Biene mehr dem Gesicht oder dem Geruch; **Geier**, 837.

Ortssinn der Bienen (Russ.); **Seißkov**, 2483.

Behaviour, *Stelidae*; **Turner**, 2575.

Bombus Lebensgewohnheiten; **Sundvik**, 2473.

Melecta armata à l'état d'œuf et de larve; **Sémichon**, 2259.

Nestbau, *Neocorynura erinnyis*; **Lüderwaldt**, 1465.

Nestbau von *Osmia bicornis*; **Lozinski** Zs. wiss. Insektenbiol. 7 pp. 223-230 316-322.

Queen atavistic, etc.; **Buttel-Reepen**, 324.

Temperatur, Entwicklung (Russ.); **Paleičuk**, 1792.

Hochzeitsflüge (Russ.); **Aleksandrov**, 19.

Verhinderung der Abnützung der Flügel (Russ.); **Levenec**, 1417.

Anormales Ueberwintern; Ersatz einer kranken Königin durch eine neue seiters der Bienen (Russ.); **Melinikov**, 1559.

Eierlegende Arbeiterinnen in Gegenwart einer Königin (Russ.); **Karasev**, 1201.

Transport Eier (Russ.); **Balašov**, 82.

Schwärmen (Russ.); **Bogdanov**, 199.

Wasp-life (Social and Solitary).

Mercet, 1561.

Note sur les Vespides; **Pérez**, 1823.

Vespa germanica; **Black-Hawkins**, 191.

Mutilation of bees; **Harvie-Brown & Armitt** p. 15 Naturalist 36.

Polistes pallipes founding a colony; **Girault**, 882.

Synoeca, nests; **Meade-Waldo**, 1543.

Bauten etc. *Odynerus* (Russ. + deutsch. Rés.); **Malyšev**, 1496

Recherches biologiques sur les guêpes solitaires; **Roubaud**, 2105.

Natural history, *Synagris*; **Roubaud**, 2109.

Biologie de *Trypoxylon* et *Psenulus*; **Popovici-Bazosanu**, 1912.

Bembex nubilipennis nesting habits; **Parker**, 1797.

Ampulex fasciatus; **Picard**, 1882.

Nestbau und Larvenfutter der Craebro-Arten (Holländisch); **Bouwman**, 242.

Habits, *Tiphia femorata*; **Adlerz**, 6.

The stinging of *Gryllotalpa coarctata* by *Diamma bicolor*; **Hardy**, 1008.

Termite-life.

Gesellschaftsleben der Termiten (Schwedisch); **Holmgren**, 1094.

Termitidae ricerche; **Sandias**, 2138.

Termites et plantes vivantes; **Chaine**, 388 & 389.

Termiten und Ameisen; **Prell**, 1946.

K. Escherich, Termitenleben auf Ceylon; **Wasmann**, 2695.

Termes ceylonicus; **Bugnion**, 304 & 305.

Termites in Jamaica; **Andrews**, 38.

Nester centralasiatischer Termiten; **Vasiljev**, 2611.

Termitenbau und Ziegelbrennerei; **Rohland**, 2061.

Termitofili Ceylon; **Silvestri**, 2312.

Guests, Fam. n.; **Silvestri**, 2308.

Termite guests; **Wasmann, 2699**.—Tabelle der *Termitophya*- und *Xenogaster*-Arten; **Wasmann & Holmgren, 2702**.—Termitophilous Lamellicorns; **Luederwaldt, 1463**.—Termitophile Dipteren; **Miehl, 1598**.

Cavernicolous, Subterranean.

Nouveau procédé de capture des Coléoptères hypogés; **Normand Echange 27 pp. 114 & 124**.

Cave insects Spain; **Bolívar, 207**.

Bathysciinae; **Jeannel, 1160 & 1161**.

Cave *Silphidae*; **Müller, 1666**.

Hungary, Cave Col., 3 spp. n.; **Csiki, 532**.

Neue *Pholeuon* Grotten von Bihar; **Csiki, 531**.—Cave Coleoptera; **Müller, 1664 & 1667**.

Höhlenexkursionen, kroatischen Montangebiet; **Stiller, 2382**.

Grottensilphiden aus Bosnien; **Reiter, 2001**.

Coléoptères cavernicoles du Djurdjura; **Peyerimhoff, 1836 & 1839**.

Diptères Cavernicoles; **Bezzi, 180**.

Aquatic.

Elophila, aquatic larva; **Forbes Psyche 18 p. 120**.

Argentinischen Rüsselkäfer das im Wasser schwimmen kann; **Franck, 777**.

Hygrophiler Rüsselkäfer; **Kolbe, 1286**.

Diptere amphibie; **Brocher, 273**.

Neue marine Chironomide; **Alverdes, 31**.

Respirationsverhältnisse bei unter dem Eise überwinternden, luftatmenden Wasserinsekten; **Wesenberg-Lund, 2723**.

Respiration des insectes aquatiques; **Brocher, 274**.

Gregariousness.

Massenaufreten von *Calosoma cupreum* und *Pardileus calceatus* (Russ.); **Lučnik, 1457**.

Flight, Migration.

Cases of phoresie (transport); **Banks, 98**.

Mallophaga transported by Hippoboscidae; **Jacobson, 1151**.

Verbreitung der Schmetterlinge; **Kürtösi, 1319**.

Danaus plexippus, migration; **Davis J. New York Ent. Soc. 19 p. 199**.

Migration of *Alabama argillacea*; **Grossbeck, 959**.

Migration of *Belenois severina*; **Hobley p. 72 J. East Africa Soc. 2**.

Massenflug von *Ranatra linearis* in Odessa (Russ.); **Kiričenko Rev. Russe ent. 11 p. 167**.

Migrations of *Odonata* and of ants; **Wolf Ent. News 22 pp. 419–420**.—*Libellula*, migration; **Baxter p. 243 Ent. Rec. 23**.

Wie hoch steigen die Insekten durch die Lüft hinauf? (Norweg.); **Lie-Pettersen, 1425**.

Sound-production.

Sound-production; **Swinton, 2493**.

Studying the stridulations of Orthoptera; **Allard, 28**.

Musical habits of *Orthoptera*; **Allard, 24, 25, 26, 27**.

Neduba and *Aglaothorax* stridulation; **Pemberton, 1816**.

The sound-making of Diptera and Hymenoptera; **Pemberton, 1817**.

Schallapparat, *Endroba aurita*; **Peter, 1831**.

Stridulation *Idionotus*; **Walker, 2685**.

Stridulation Ichneumonid pupa; **Morley p. 404 Ent. 45**.

Food-habits.

Les variations du régime alimentaire chez les Coléoptères xylophages de la famille des Bostrychides. Parallélisme du régime chez les Bostrychides et les Scolytides adultes; **Lesne, 1411**.

Coprophagous and necrophagous habits; **Luederwaldt, 1464**.

Carrion-feeding *Coleoptera*; **Selous, 2257**.

Übertragung des Ambrosiapilzes von *Xyleborus dispar*; **Neger, 1704**.

Food habits of American gall midges; **Felt, 728.**

Europäische Mordraupen; **Gauckler, 831.**

Medullary spots: life history of cambium miners; **Grossenbacher, 960.**

Ptilocerus ochraceus paralysing and sucking ants; **Jacobson, 1152.**

Carabus coriaceus, Gehäuse-schnecke; **Unzicker** Zs. wiss. Insektenbiol. 7 p. 192.

Leben der *Syrphus*-Larven; **Keller, 1214.**

Megarhinus food-habits; **Knab, 1279.**

Keeping adult *Anopheles* alive without feeding on blood; **Adie, 4.**

Dragon flies, food of; **Fulton J.** Bombay Soc. 20 p. 876.

Hunting habits of an American *Amomphila*; **Turner Psyche 18** p. 13.

Parasitic.

Insect parasitism and its peculiarities; **Wheeler, 2737.**

Parasiten 1 u. 2-ter Ordnung unter den *Hymenoptera parasitica* (Russ.); **Sevyrev, 2271.**

Ekto- und entoparasitische Coleopteren; **Kolbe, 1285.**

Polyctenidae as parasites; **Horvath, 1110.**

Lebensweise, *Hemimerus*; **Heymons, 1067.**

Entoparasitical larvae of *Muscidae* in *Arthropoda*; **Nielsen, 1727.**

Schmarotzer verschiedener Insekten; **Rudow** Ent. Rdsch. 28 p. 3.

Parasites, *Hymenoptera*, of *Coleoptera*; **Elliott & Morley, 668.**

Stechen tropische *Chalcis*-Arten Bienen-Imagines an ?; **Schulz, 2235.**

Thysanoptera by Chalcid; **Russell, 2122.**

Sarcophagid in a turtle; **Patterson, 1803.**

Mydaea anomala, a parasite of South-American birds; **Nielsen, 1728.**

On the parasitism of the larvae of *Pollenia rudis* in *Allolobophora chlorotica*; **Keilin, 1213.**

Phoridae and Myriapods; **Banks, 93.**

(N-9186 j)

Hosts of insect egg-parasites in North and South America; **Girault, 889.**

Parasite des œufs de la *Cochylis* et de l'*Eudemis*; **Marchal & Feytaud, 1512.**

Blattwespenlarven und Schlupfwespen; **Forsius, 770.**

In Kiev aus Raupen aufgezogene parasitische Hymenopteren (Russ.); **Kurdjumov, 1329.**

Lebensweise und Fortpflanzung von *Habrobracon hebetor* dem Schädling der Mehlmotte; **Berliner, 154.**

Parasiten an einem Bläuling; **Fassl** Ent. Zs. Frankfurt 25 p. 117.

Parasiten der Psychiden (Russ.); **Zykov, 2800.**

Schmarotzer der Bombycidae; **Rudow, 2116.**

Parasiten der Eier und Raupen von *Agrotis segetum* Gouv. Poltava (Russ.); **Kurdjumov, 1335.**

Parasites of *Lagopus*; **Shipley, 2289.**

Parasitic *Chironomus* larva; **Bar-nard, 98.**

Lebensweise, *Pseudogonolus hahni*; **Reichert, 1995.**

Symbiosis. (Vide etiam Ant-life, Termite-life.)

Die Feigenbäume Italiens; **Tschirch, 2560.**

Uebertragung und Keimung des Ambrosiapilzes von *Xyleborus (Anisandrus) dispar*; **Schneider-Orelli, 2198.**

Nests, Habitat.

Relations of soil and fauna; **Holdhaus, 1083.**

Vertikale Verbreitung der Lepidopteren in der Columbischen Central-Cordillere; **Fassl, 718.**

In den Nestern von Warmblütern; **Bickhardt, 184.**

Twig-dwelling *Cicindelidae* larvae; **Horn, 1102.**

Salt-water, larvae of *Eristalis*; **Lamb** p. 215 Ent. Mag. 47.

Foliage *Coleoptera*; **Morris, 1644.**

L'orientation des nids; **Rabaud, 1964.**

Phryganea grandis Mechanik, Gehäusebaues; **Wesenberg-Lund**, 2724.

Larven von *Cetonia aurata* und *Trichius fasciatus* in Ameisennestern; **Adlerz**, 7.

Sex-relations.

Dichagamie bei Lepidopteren und Orthopteren (Russ.); **Korsakov**, 1293.

Sex-relations of *Lampyridae*; **McDermott**, 1486.

Bedeutung sekundärer Geschlechtscharaktere am Kopfe weiblicher Platypodiden; **Strohmeyer**, 2462.

Rapprochement des sexes, Diptères; **Pérez**, 1824.

Copulation der Ichneumoniden (Russ.); **Ševyrev**, 2271.

Accouplement et la ponte chez *Bombyx mori*; **Conte**, 475.

Liebe; **Bryk**, 297.

Copula, *Euryades*; **Giacomelli**, 851.—Of *Aglais urticae*; **Chapman** p. 208 Ent. Rec. 23.—Kopula von *Taenio-campa stabilis* ♂ × *gothica* ♀; **Gerwien** Zs. wiss. Insektenbiol. 7 p. 27.—*Sanninoidea exitiosa*, copula, etc.; **Cory**, 496.—Copula von *Prumna primnoa*; **Ikonnikov**, 1138.

Abnormalitäten in der Begattung Microlepidopteren; **Mitterberger**, 1608.—Abnormal copula; **Olivier**, 1768.—*Argynnis* + *Melitaea* cop.; **Rothschild** p. 403 Ent. 44.—*Nonagria* and *Leucania* paired; **Todd** p. 34 Entomologist 44.—*Pidonia lurida* ♂ und *Gaurotus virginea* ♀; **Scheeser** Ent. Bl. 7 p. 180.

Parental, Oviposition.

Eiablage von *Pimpla*, *Banchus* (Russ.); **Ševyrev**, 2271.

Viviparous *Rhopalocera*; **Chapman**, 394.

Oviposition *Lep.*; **Peyron**, 1840.

Oviposition, *Epitelia* and *Synoeca*; **Meade-Waldo**, 1543.

Ponte de *Malacosoma neuustria*; **Postel**, 1935.

Eiablage, *Gonia capitata* (Russ.); **Kurdjumov**, 1335.

Ponte du *Stomoxys calcitrans* et l'élevage des larves de Muscides; **Langeron**, 1356.

Ponte des Odonates; **Pierre**, 1895.

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Oecanthus, oviposition; **Parrott**, 1798.

Brutpflege der Rosssäfer; **Spaney**, 2360.

Ei-Beschreibungen; **Skala** Ent. Jahrb. 21 pp. 113–114.

Hibernation. Aestivation.

Phenology.

Hivernage; **Dupont**, 630.

Flugzeit einiger Schmetterlingsarten; **Hafner** Ent. Zs. Frankfurt 25 p. 195 etc.

Hybernation, *V. atalanta*; **Newman**, 1714.

Eggs of silkworms (bivoltins), hibernation of; **Hirose**, 1075.

Hybernation of the maggot parasitic to silkworms (Japanese); **Niwa**, 1735.

Instinct, Psychology.

Intelligenz bei Raupen; **Hering** Zs. wiss. Insektenbiol. 7 p. 360.

Psychologie der Hemipteren (Russ.); **Erikson**, 700.

Le déterminisme de l'isolement des larves solitaires; **Rabaud**, 1965.

Senses and psychology; **Willem**, 2758.

The reactions of mosquitoes to light in different periods of their life history; **Holmes**, 1091.

Photic reactions, *Diptera*; **Hermes**, 1052.

Geruch und Gesicht, *Macroglossa*; **Krause** Ent. Rdsch. 28 p. 124.

Orientierungsvermögen der Hymenopteren; **Adlerz**, 5.

Insects attracted by light; **Bayford** pp. 157–159 Ent. Mag. 47.

Attitudes. Luminosity.

Attitude, *Dysdaemonia kadeni*; **Jordan** p. xxv P. ent. Soc. London 1911.

Light of *Lampyridae*; **Coblentz**, 431 & 432; **Singh & Maulik**, 2317.

Biologie des Lampyrides; Olivier, 1776.

Uses, etc., of *Lampyridae* luminosity; Olivier, 1769.

Light of *Photinus*; McDermott, 1486.

Johanniskäferlicht und Organismen-leuchten; Weitlaner, 2715.

Palatability and mimicry; Pocock & Poulton, 1905.—The luminosity of termites; Branner, 250.

Ursachen des Leuchtens von *Chironomus* (Russ. + deutsch. Rés.); Tschchenko, 1142.

Resemblance, Protection, Utility.

Mimicry; Cockayne, 433; Dixey, 596; Jordan, 1181; Poulton, 1938.

Mimicry difficulties; Schaus, 2164.

Mimicry, Bourbon, Mauritius, Ceylon, etc.; Manders, 1497.

Mimicry in East Africa; Rogers, 2060.

Müllerian mimicry; Manders, 1498.

Review of paper by Punnett: Mimicry in Ceylon butterflies; Lutz Amer. Nat. 45 pp. 190–192.

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Ein borkenähnlicher - Rüsselkäfer *Mecocorynus cristatus*; Heller, 1035.

Hemiptera and *Hymenoptera*; Hamm, 999.

Pompilid and Reduviid; Chapman p. xxix P. ent. Soc. London 1911.

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Grüne und braune Individuen, *Mantis religiosa*; Krause, Zs. wiss. Insektenbiol. 7 p. 189.

Colour of *Lep.* larvae in relation to surroundings; Bridges, 262.

Unpalatability; Shelford p. 245 Ent. Rec. 23.—Palatability of *Danainae*; (x-9186 j)

Andrewes, 36.—Distastefulness of *Anosia plexippus*; Banta Nature 88 p. 243 & Pocock l.c.

Food of woodpeckers; Beal, 121.

Scents of butterflies; Dixey, 597.

Natural history (special cases).

Calosoma, larval activity; Burgess, 310.

Natural history of the larvae of *Donaciinae*; Böving, 197.

Tenthredinidae, Lebensgewohnheiten; Forsius, 769.

Larval habits of Swedish *Lepidoptera*; Peyron, 1840.

Lasiocampa pini; Eckstien, 655.

Culicidae, larve e immazini: cortumi, mezzi di distruzione; Gaffi-Valerio & Rochaz de Jongh, 825.

Clinocera-Arten, Lebensweise; Kertész, 1229.

Habits of *Sarcophagidae*; Patterson, 1804.

Biologie von *Hydrotaea dentipes* (Russ.); Porčinskij, 1930.

Biologie der Asopiden; Schumacher, 2244.

Paläarktische *Cimiciden*; Reuter, 2024.

Clinocoris lectularius (Ungarisch); Sajó, 2131.

Notostira (Schwedisch); Reuter, 2023 & 2025.

Dermapteron, Räuber von Ameisen-larven; Krausse, 1305.

Diapheromera femorata, life history; Severin & Severin, 2269.

Biologische Beobachtungen *Dixippus morosus*; Meissner, 1552.

Lebensweise, etc., *Brachycolus krotnewi* (Russ.); Kurdiumov, 1332.

Pupal habits, cocoons.

Coloration of cocoons of *Lep.*; Dewitz, 572, 573 & 574.

Suspended cocoons; Strand, 2392.

Insects and Plants and Flowers.

Insects and flowers; Burkin, 312; Kirchner, 1262.—Blütenbesuchende In-

sekten, Eichstätter Alp; **Bachmann**, 75.

Einfluss der Kaukasischen Bienen auf die Befruchtung des roten Klee (Russ.); **Evdokimov**, 711.

New Zealand's experience with the red clover and bumblebees; **Graenicher**, 916.

Bruchophagus funebris, fertilization of clover; **Washburn** J. Econ. Ent. 4 pp. 140-142.

Ins. and *Vicia*; **Hetschko**, 1060.—Faunistik, *Urtica*; **Hedicke** Zs. wiss. Insektenbiol. 7 p. 101: Insectes du rosier; **Coulon**, 503: *Acer*, Liste des Insectes et Phytotides; **Guignon**, 989: *Eonymus*, parasites, insectes et champignons inférieurs; **Guignon**, 990: *Gypsophila fastigiata* und ihre Bewohner; **Petry**, 1834.

In Farnen parasitierende Hymenopteren- und Dipteren-Larven; **Meyere**, 1580.

Host index to California plant lice; **Essig**, 709.

Propagation de l'Ergot; **Mercier**, 1565.

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Insectes et Phytotides, tant européens qu'exotiques, signalés sur divers érables; **Duchaussoy**, 624.

Entwicklungsgeschichte und Anatomie der Cynipidengallen der Eiche; **Weidel**, 2711.

Gallenbildende Rüsselkäfer; **Schmidt**, 2191.

Gallenerzeugenden Schmetterlingen; **Schmidt**, 2192

Cécidies des chênes des Maures; **Cotte**, 500.

Cécidologie des Cistes de Provence; **Cotte**, 502.

Cécidies Vichy; **Cotte**, 501.

Hosts and galls of American gall midges; **Felt**, 736.

Galls of Massachusetts; **Stebbins**, 2370.

Galls of Michigan; **Cook**, 481.

Dryophanta, galls; **Beutenmüller**, 177.

Galles de *Tamarix articulata*; **Trabut**, 2549.

Zoocécidie nouvelle de l'orge; **Noury**, 1739.

Cécidies de *Potentilla verna* et de *P. reptans*; **J. G.** Feuille jeunes natural. 41 1610 p. 18.

Fumaria officinalis, *Dorycnium suffruticosum*, Cécidies; **Guignon** Feuille jeunes natural. 41 p. 154.

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Hymenopteren in *Lipara*-Gallen, *Cemonus*; **Müller**, 1669.

Über Gallen und Gallentiere Chile, **Kieffer & Herbst**, 1256.

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Gall of *Gnorimoschema* on *Aster*; **Fyles**, 817.

Galle von *Cecidosia*; **Dieckmann**, 577.

Neue Blattlausgalle an *Crataegus oxyacantha*; **Schmidt**, 2193.

Aphis-gall; **Sasaki**, 2153.

Cochenille cécidogène; **Marchal**, 1507.

Cocciden, entstandene Umbildung der oberirdischen Triebe von *Psilotum triquetrum*; **Docters van Leeuwen-Reijnvaan**, 603.

Pilzzüchtende Gallmücken (Ambrosiagallen); **Neger**, 1702.

Thrips-Gallen und Gallen-Thripse; **Karny**, 1204.

VARIATION AND AETIOLOGY.

General.

The effects of inbreeding and selection on the fertility, vigor and sex ratio, *Drosophila*; **Moenkhaus, 1622**.

The relation between chromosome-number and species in *Notonecta*; **Browne, 279**.

Dimorphism, spermatozoa; **O'Donoghoe, 1758**.

Variation.

Variation, value of projected efficiency; **Sweeting, 2488**.

Häufiges Auftreten verschiedener Schmetterlings-Arten und die Sonnenfleckenperioden; **Dieroff, 579**.

Influence of climate in producing aberrations; **Franck, 776**.

Variations biologiques et morphologiques d'origine géographique, *Stomoxys calcitrans* en Afrique tropicale; **Roubaud, 2104**.

Seasonal dimorphism; **Merrifield, 1566**.

A tendency towards posterior erythrization in the *Psammocharidae*; **Banks, 94**.

Ergebnisse aus Zuchtexperimenten, traduction; **Standfuss, 2367**.

Experimente an überwinternden Lepidoptera-Puppen; **Reiff, 1997**.

Temperaturexperimente; **Glaser, 895**.

Experimental varr. *V. io*; **Reuss, 2020**.

Vanessa urticae, temperature variation; **Reuss, 2019**.

Variation in size, temperature experiments; **Merrifield, 1567**.

Diabrotica soror, color pattern; variation; **Kellogg, 1216**.

Häufigkeit der Aberrationen von *Chrysomela varians*; **Meissner, 1551**.

Phytodecta (Spartophila) variabilis; **Reineck, 1999**.

Variable maculation in *Coccinellidae*; **Leng, 1385**.

Variable Chilean *Col.*; **Germain, 845**.

Wasps, variability in a single nest; **Pearson, 1813**.

Das Variieren der Hummeln; **Vogt, 2652**.

Variation spécifique des Lépidoptères; **Houlbert, 1114**.

Variations de l'*Agria tau*; **Oberthür, 1744**.

Variationsstufen von *Pieris napi*; **Stichel, 2379**.

Vitale Färbung der Mikrolepidopterenraupen; **Sitowski, 2320**.

Nature of melanism; **Stewart, 2377**.—**Sich** p. 318 Ent. 44.—Melanism, *Amphidasys*; **Leigh, 1380**.—Melanismus im oberschlesischen Industriebezirk; **Raebel, 1969**.—Melanismus, Schmetterlingen; **Dieroff, 578**.—*Cymatophora or*, melanic var.; **Hasebroek, 1011**.

Deficient pigment, *Noctua*; **Wavrier** p. 363 Ent. 44.

Colour dimorphism, pupa of *Leioptilus*; **Chapman** p. 243 Ent. Rec. 23.

Double mutants, silkworm; **Spillman, 2364**.

Anpassung der Polyceteniden (Un- gar.); **Horváth, 1111**.

A variant, periodical cicada; **Gortner, 904**.

Eutermes; **Holmgren, 1093**.

Variationserscheinungen, Flügelgeäder von *Leptis vitripennis*; **Kleine, 1274**.

Origin of wing mutations, *Drosophila*; **Morgan, 1634**.—Origin of mutations, eye color *Drosophila*, and inheritance; **Morgan, 1635**.

Teratology.

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Monstrositäten; **Frings, 795**.

Missbildungen, Käfern; **Rudow, 2177**.

Teratologia Coleotteri; **Beffa, 129**.

Neue Monstrositäten Coleopteren; **Kříženecký, 1313**.

Coleotteri anomali; **Chinaglia, 402, 403 & 404**.

Antenna, teratology, *Diptera*; **Lamb, 1348**.

Colias edusa tératologique; **Le Cerf** Levallois-Perret Ann. assoc. natural. 15-16 pp. 19-25 av. fig.

Hybrids.

Hybrid Lycaenid; **Reuss**, 2018.

Les sphingides hybrides; **Oberthür**, 1743.

Schwärmerhybriden; **Denso** Intern. ent. Zs. 5 p. 228.

Raupen der *Deilephila*-Hybriden; **Kysela**, 1341.

Smerinthus ocellata atlantica ♂ × *Smer. ocellata ocellata* ♀; **Dannenberg** Zs. wiss. Insektenbiol. 7 p. 190.

Celerio hybr.; **Denso**, 566: *Celerio* 1 n. hybr.; **Denso** Ent. Zs. Frankfurt a. M. 25 p. 184: Hybr. *Celerio galii galii* Rott. × *Celerio euphorbiae mauretanica* Stgr.; **Denso** Intern. ent. Zs. 5 p. 258: *Celerio*-Hybrid; **Denso** Ent. Zs. 25 p. 171.—*D. vespertilio* × *galii*; **Pernold**, Ent. Zs. Frankfurt 25 p. 207.

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Raupe des Hybriden *Saturnia*; **Wünsche** Ent. Zs. Frankfurt a. M. 52 p. 203.

Lym. dispar Zuchten; **Frings** Ent. Zs. 25 p. 167.

Notodonta hybr. *heinickei* × *tritophus*; **Hammerling** Intern. ent. Zs. 5 p. 273.

Double mating, silk-worm; **Castle**, 377 & **Kellogg**, 1217.

Hybridation, Ameisen; **Viehmeier**, 2631.

Nematus-Bastard; **Enslin**, 694.

Rassenkreuzungen, *Celerio*; **Denso** Ent. Zs. 25.

Hybridization in a mutating period in *Drosophila*; **Morgan**, 1633.

Crossing varr. of *Hybernia marginaria*; **Edelsten** p. xxiv P. Ent. Soc. London 1911.

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Heredity.

Vererbungsstudien, *Pygaera*; **Federley**, 724.

Getrennte Vererbung der Geschlechter; **Meijere**, 1548.

Vererbung der sekundären Geschlechtscharaktere; **Goldschmidt**, 900.

Forty-nine generations in the dark, *Drosophila*; **Payne**, 1807.—*Drosophila ampelophila* bred in the dark for sixty-nine generations; **Payne**, 1808.

Erbformeln der *Agria tau*-Rassen; **Plate**, 1902.

Dominance, *Leptinotarsa*; **Tower**, 2545.

Incroci e caratteri ereditari in relazione alle leggi di Mendel di *Sericaria mori*; **Quajat**, 1958.

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Cym. or ab. albingensis Warn. nach den Mendelschen Regeln; **Hasebroek** Intern. ent. Zs. 5 pp. 9-11.

Heredity in *Adalia*; **Palmer**, 1793.

Befruchtung der Königin mit Drohen bestimmtes Rasse (Russ.); **Pivovarov**, 1901.

Evolution.

Lamarckismus and *Lepidoptera*; **Rosa**, 2075.

Progressive Entwicklung der äusseren Merkmale bei *Calopteryx* (Russ.); **Bartenev**, 109.

Entwicklung der Raupenzeichnung, phylogenetische Studie; **Voss**, 2659.

Experiments, *Drosophila*; **Lutz**, 1473.

Phylogeny; **Corbett**, 489.

Fossil insects and phylogeny; **Handlirsch**, 1006.

Phylogeny of *Coleoptera*; **Gahan**, 822.

Phylogenie der Honigbienen; **Ihering**, 1133.

Die fossilen Copeognathen und ihre Phylogenie; **Enderlein**, 681.

Phylogenie, *Notostira*; **Reuter**, 2023.

GEOGRAPHY or FAUNISTIC.

General.

Distribution of *Coleoptera*; **Deville**, 571.

Distribution géographique des Lamproydes; Olivier, 1774.

The geographical distribution of ants; Forel, 759.

Geographische Verbreitung der Arten und Formen von *Calopteryx* (Russ.); Bartenev, 109.

Utilité des recherches locales et des catalogues régionaux; Houlbert, 1110.

Smerinthus ocellatus at sea; South p. 34 Entomologist 44.

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Arctic & Antarctic.

Bernhauer & Daniel, 163; Bären-Insel u. Spitzbergen.

Nathorst, 1681; Spitzbergen (Swedish.)

Schmiedeknecht, 2194; Bären-Insel u. Spitzbergen 2 spec.

Rebel, 1985; Ostgrönland. *Cnephasia* sp. n.

Ulmer, 2593; von der Bären-Insel *Apatania arctica*.

Kieffer & Lundbeck, 1257; Bären-Insel u. Spitzbergen *Chironomidae* spp. n.

Dampf, 549; Spitzbergen *Ceratomyxus vagabundus*.

Neumann, 1711; Antarkt. *Lipeurus* sp. n.

Insular.

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New Pomerania. *Coleoptera*. Bourgeois, 236; *Metriorrhynchus* sp. n.

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Caroline islds. *Coleoptera*. Olivier, 1772; *Atypheila* sp. n.

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Falkland islds. *Lepidoptera*. Hampson, 1000; *Episilia* sp. n.

Palaeartic Region.

(a) Collectively.

Coleoptera.

Heikertinger, 1030; Halticinen-arten Europa und Nordamerika gemeinsam.

Bickhardt, 185; 2 spp. n. *Hister* und *Saprinus*.

Desbrochers, 570; *Rhytirhinides* spp. n.

Heikertinger, 1033; *Phyllotreta* spp. n.

Jacobson, 1153; Russland und West-europa (Russ.).

Jeannel, 1160; *Bathysciinae* spp. n.

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Pic, 1855; Notes Coléoptères palé-arctiques principalement gallo-rhé-nans.

Reitter, 2016; Käfer des Deutschen Reiches. Bd 3.

Reitter, 2003; 11 spp. n.

Hymenoptera.

Howard, 1120; Existe-t-il un change-ment dans la faune des *Aphelinidae* en Europe?

Friese, 782; Neue Bienen.

Girault, 887; *Pentarthron* sp. n.

Lange, 1355; Neue Ichneumoniden.

Mocsáry, 1617; *Chrysididae* spp. n.

Turner, 2580; Mogador *Myzine* sp. n., Persia *Sapyga* sp. n.

Vogt, 2652. *Bombus* spp. n.

Lepidoptera.

Grünberg, 973; *Lasiocampidae*, *Le-moniidae*, *Eupterotidae*, *Bombycidae*.

Jordan, 2224; *Saturniidae* revision.

Lampert, 1353; *Lepidoptera* Europas und Russisch-Asiens (Russ.).

Lucas, 1443; France, Algérie, Tunisie.

Niepelt, 1730; Turkestan 2 spp. n., *Parnassius*, *Arctia*.

Oberthür, 1746; Faune française et algérienne.

Warren, 2693; *Noctuidae* revision.

Diptera.

Bezzi, 180; Cavernicoles, *Limosina* spp. n.

Sack, 2125; *Syrphiden* spp. n.

Villeneuve, 2639; 2 spp. n. *Angio-metopa* and *Calliophrys*.

Wainwright, 2683; Switzerland and Algeria, *Chilosia* 2 spp. n.

Hemiptera.

Bergroth, 147; *Halobatinae* palé-arctique.

Horváth, 1109; many spp. n.

Kiritshenko, 1266; Russian empire *Heteroptera* spp. n.

Lindinger, 1429; Turkey and Persia 2 spp. n.

Šulc, 2467; *Trioza* Monographia.

Embioptera.

Krauss, 1303; spp. n.

(b) Europe, collectively.

Insecta.

Ramme, 1975; Reise Oberitalien und Südtirol.

Coleoptera.

Eggers, 664; *Scolytidae* spp. n.

Roubal Ent. Bl. Berlin 7 1911 pp. 237-239; Europae Coleopterorum patriae novae.

Roubal, 2099; 2 spp. n., *Othius* and *Anaspis*.

Hymenoptera.

Viereck, 2635; *Braconidae* spp. n.

Lepidoptera.

Mittbergerer Intern. ent. Zs. 4 p. 280; Verbreitung, *Biston lapponaria*.

Protura.

Rimsky-Korsakow, 2038; *Eosentomon* sp. n. (Russ. + deutsch. Rés.)

(c) North Europe and Siberia.

Insecta.

Dahlgren, 546; Skandinavien, Notizen.

Lundblad Ent. Tidskr. 32 p. 208; Schweden, neue Lokale.

Schneider, 2197; Insektenfauna von Maalselven, Norwegen (Norweg).

Coleoptera.

Gassner, 830; Süd-Transbaikalien und Mongolia.

Helliesen, 1039; New for Norway (Norweg).

Holdhaus, 1084; Fauna der Färöer.

Kniž, 1281; *Holcophilydrus* subgen. n. und *Cercyon*, spp. n. Ostsibirien.

Münster, 1670; Norwegen neue *Staphylinidae*.—Münster, 1671; Norwegens *Catops* sp. n. (Norweg).

Sahlberg, 2127; Finlands 3 spp. n.—Sahlberg, 2128; Finland *Aleochariden*.—Sahlberg Medd. Soc. Fauna Fenn. 37 p. 54; Finland *Pediacus depressus*.

Sandin, 2140; neu für Schweden.

Semenov, 2258; Ussuri *Rosalia* sp. n.

Hymenoptera.

Aurivillius, 59; Swedish *Tubulifera*.

Forsius, 769; *Tenthredinidae* 2 spp. n.—Forsius, 770; Schlupfwespen.—Forsius, 771; *Diprion* spp. n. Finland.

Nordenström, 1737; Sweden parasitic *Hym.*

Roman, 2073; Südfinnland Gezogene Ichneumoniden.

Lepidoptera.

Čugunov, 535; Ob-Jenissei-Kanal. (Russ.)

Djakonov, 598; Murmanküste. (Russ.)

Fabritius Medd. Soc. Fauna Fenn. 37 p. 130; *Microlepidoptera* Finland novelties.

Grum-Gržimajlo, 981; Lepidopteren von Troitzkossawsk und nord. Mongolei.

Lagerberg, 1345; Schweden *Macrolepidoptera*. (Schwed.)

Ljungdahl Ent. Tidskr. 32 p. 126; Schweden. Notizen.

Peyron Ent. Tidskr. 32 p. 125; Sweden *Lepidoptera* new localities.

Sheldon, 2280; Jemtland and Lapland short excursion.

Sjöstedt Ent. Tidskr. 32 p. 211; Sweden rare *Lepidoptera*.

Stichel, 2380; Nordisch. Schmetterlingsfauna.

Tschetverikov, 2559; Halbinsel Yamal *Schoyenia* sp. n.

Vretling Ent. Tidskr. 32 p. 86; Norwegen Imago von *Eriogaster lanestris* var. *arbusculae*.

Wegelius Medd. Soc. Fauna Fenn. 1911 p. 32; Björneborg *Deilephila nerii*.

Werner-Nielsen, 2721; *Macrolepidopterstatistisches* für Norwegen. (Norw.)

Diptera.

Alverdes, 31; *Trichocladius* sp. n.

Frey Medd. Soc. Fauna Fenn. 37 p. 91; *Diptera* Notizen.

Ringdahl, 2041; Sweden *Merodon equestris* and *Ischyrosyrphus laterarius* new.

Aphaniptera.

Wahlgren, 2682; Norwegen *Ctenophthalmus* sp. n.

Hemiptera.

Poppius, 1917; *Lygus* sp. n. Finland.

Reuter Ent. Tidskr. 32 p. 206; Scandinavia further finds of *Teratocoris herbaticus*.

Wuorentaus Medd. Soc. Fauna Fenn. 37 p. 72; Hemipterenfunde aus Finland. (Finnisch.)

Ephemeroptera. Plecoptera. Thysanoptera.

Trägårdh Ent. Tidskr. 32 pp. 91-104; Sweden *Prosopistoma foliaceum*.

Klapálek, 1272; *Neoperla* sp. n. Ladogebiet.

Bagnall, 79; Norway *Thys.* 2 spp. n.

Orthoptera and *Aptera*.

Ikkonnikov, 1138; Ostsibirien *Acridioidea* spp. n.

Linnaniemi, 1430; Apterygotenfauna Norwegens.

Trägårdh, 2551; *Protura* in Schweden gefunden.

(d) **British Islands.**

THE FAUNA AS A WHOLE.

Coleoptera.

Retrospect for 1910; **Beare, 122**.

The british *Haliplus*, novelties; **Edwards, 662**.

Haliplus sp. n.; **Browne, 280**.

Homalota sp. n.; **Sharp, 2277**.

Atheta liliputana novelty; **Cameron, 346**.

Atheta inhabilis vice *Epipeda nigricans*; **Joy p. 111 Ent. Mag. 47**.

Tachyporus sp. n.; **Nicholson, 1725**.

Quedius sp. n.; **Sharp, 2275**.

Quedius picipennis; **Joy, 1194**.

Quedius heidenreichi vice *vexans*; **Beare p. 140 Ent. Mag. 47**.

Stenus formicetorum novelty; **Dollman, 609**.

Lesteva luctuosa novelty; **Donisthorpe, 615**.

Bledius novelties, 2 spp. n.; **Sharp, 2273**.

Bledius diota novelty; **Sharp, 2274**.

Bledius novelties; **Sharp, 2276**.

Two spp. n., *Bledius* and *Rhynchites*; **Joy, 1196**.

Two spp. n., *Anisotoma* and *Thinobius*; **Joy, 1192**.

Anisotoma, *Liodes* sp. n.; **Joy, 1195**.

Anisotoma algerica novelty; **Donisthorpe p. 44 Ent. Rec. 23**.

Choleva fuliginosa novelty; **Nicholson, 1726**.

Barypithes sp. n.; **Keys, 1231**.

Ceuthorrhynchus marginatus etc.; **Edwards, 663**.

Longitarsus revision, novelty; **Tomlin & W. E. Sharp, 2538**.

Hymenoptera.

List of british ants; **Donisthorpe, 612**.

Tryphoninae, general work, spp. n.; **Morley, 1640**.

Pimpla sp. n.; **Morley, 1638**.

Trichopria sp. n.; **Kieffer, 1250**.

Mymar sp. n.; **Enock, 688**.

Anaphoidea sp. n.; **Girault, 876**.

Polynema brittanum sp. n.; **Girault, 879**.

Macrophya, the british; **Morice, 1636**.

Periclista pubescens novelty; **Morice, 1637**.

Lepidoptera.

Diminishing numbers of british *Lep.*; **Meldola Entomologist 1911 p. 146**.

Rare species; **Porritt & Bankes, 1921**.

Rhyacionia 2 spp. n.; **Durrant, 635**.

Papilio machaon various localities; **Ent. 44 p. 365**.

Colias records; **Ent. 44 pp. 299, 322 etc.—C. edusa; Newman & Colthrup p. 276 Ent. Rec. 23**.

Sphinx convolvuli and *A. atropos*; **Entomologist 44 pp. 405–407; Colias pp. 409 & 410**.

Vanessa antiopa in 1911; **Ent. 44 p. 324**.

S. convolvuli; t.c. pp. 325–327.

Diptera.

100 novelties, spp. n.; **Verrall, 2619**.

Hilara, novelty; **Carter, 369**.

Rhamphomyia culicina and scottish novelties; **Carter, 368**.

Muscidae many novelties; **Collin, 463**.

Anthomyza sp. n.; **Wood, 2773**.

Hemiptera.

Stenocephalus medius novelty; **Butler, 329**.

Halticus saltator novelty; **Butler**, 331.

Aphidae novelties; **Theobald**, 2514.

Ortheziola vejdvovskyi novelty; **Green**, 932.

Aquatic Hemiptera, notes and plate; **Whitaker**, 2741.

Cicadetta montana; **Lyle**, 1479.

Thysanoptera.

Novelties, spp. n.; **Bagnall**, 80.—*Trichothrips* 2 spp. n.; **Bagnall**, 81.

Odonata and *Perlidae*.

Odonata in 1910; **Campion & Campion**, 360.—In 1909 and 1910; **Speyer**, 2363.—Notes of 1910; **Lucas**, 1454.

Taeniopteryx, the british; **Morton**, 1650.

Orthoptera and fossil Insects.

Orth. in 1910; **Lucas**, 1453.

Dale collection, localities; **Lucas**, 1450.

British *Forficulidae*; **Burr**, 317.

†**Bolton**, 210; South Wales coal measures *Blattoidea* spp. n.—**Bolton**, 211; Bristol coalfield *Genentomum* sp. n.

Collembola.

Proisotoma sp. n.; **Carpenter**, 366.

Shoebottom, 2291; novelties, *Onco-podura* sp. n.

LOCAL LISTS.

Insecta, collectively.

Cornwall; **Rollason**, 2072.

Marlborough; **Meyrick** Rep. Marlborough Coll. Soc. 59 pp. 34-41; Phenology and local lists specially *Lep.*

St. Albans, general notes; **Gibbs** pp. 234-238 Tr. Hertfordsh. Soc. 14.

Yorkshire Report; **Whitaker** and others *Naturalist* 36 pp. 51-56.

Lancashire novelties; **Dunlop** *Lancash. Nat.* 3 pp. 350-356.

Ireland, notes; **Johnson** p. 219 *Irish Nat.* 20.

Ulster, *Lep.* and *Hym.* brief list; **Orr** *Irish Natural.* 20 p. 36.

Coleoptera.

Devonshire novelties; **de la Garde** p. 66 *Ent. Mag.* 47.

Plymouth novelties; **Keys** p. 15 *Ent. Mag.* 47.

New Forest *Longitarsus nigerrimus*; **Sharp** p. 257 *Ent. Mag.* 47.—New Forest *Atheta picipennis*; **Cameron** p. 214 *Ent. Mag.* 47; *Aleochara discipennis*; **Sharp** l.c.

Isle of Wight and Woolwich; **Blenkarn** p. 160 *Ent. Mag.* 47.

Portsmouth *Oxytelus saulcyi*; **Cameron** p. 111 *Ent. Mag.* 47.

Hindhead *Onthophagus taurus* and *Monochammus*; **Richards** p. 367 *Ent.* 44.

Guildford *Criocephalus fesus*; **Champion** p. 214 *Ent. Mag.* 47.

Isle of Sheppey; **Walker** p. 191 *Ent. Mag.* 47.

Bucks *Homalota picipennis*; **W. E. Sharp** p. 191 *Ent. Mag.* 47.

Hackney *Clytus arcuatus*; **Gerrard** p. 252 *Entomologist* 44.

Epping *Gnorimus variabilis* etc.; **Jennings** p. 276 *Ent. Mag.* 47.

Wicken *Bledius crassicolis*; **Beare** p. 235 *Ent. Mag.* 47.

Oxford *Symbiotes* etc.; **Walker** p. 111 *Ent. Mag.* 47.—Oxford *Medon apicalis* etc.; **Walker** p. 140 t.c.—Oxford *Barypithes pellucidus*; **Walker** p. 160 T.c.—Oxford *Mycetoporus forticornis*; **Donisthorpe** p. 247 *Ent. Rec.* 23.

Oxford *Cryptophagus fowleri*; **Collins** p. 17 *Ent. Mag.* 47.

Cheltenham short list; **de la Garde** p. 66 *Ent. Mag.* 47.

Herefordshire long list; **Tomlin**, 2539.

Yorkshire *Salpingus aeratus*; **Bayford** p. 296 *Naturalist* 36.

Cumberland in wasps' nests; **Britten** p. 89 *Ent. Mag.* 47.

Isle of Man, aquatic Col.; **Balfour Browne**, 84.

Gibside *Neuraphes rubicundus* etc.; **Bagnall** p. 247 *Ent. Rec.* 23.

Northumberland *Ptenidium intermedium* etc.; **Hall** p. 248 *Ent. Rec.* 23.

Carnarvonshire *Leptinus*; Dunlop p. 41 Ent. Mag. 47.

Coatbridge *Mycetophagus 4-gutattus*, *Helophorus tuberculatus* etc.; Brown p. 68 Ent. Mag. 47

Dumbartonshire *Cassida nobilis*; Evans p. 90 Ent. Mag. 47.

Highlands; Donisthorpe pp. 309-311 Ent. Rec. 23.

Nethy Bridge; Beare p. 139 Ent. Mag. 47.

North Ebudes aquatic *Col.*; Balfour-Browne, 83.

Ireland, novelties; Nicholson p. 139 Irish Nat. 20.

Ireland *Quedius oblitteratus*; Nicholson Irish Nat. 20 p. 55.

Kerry, short list; Wyse p. 55 Irish Nat. 20.

Hymenoptera.

Cornwall long list; Rollason pp. 90-92 Ent. Mag. 47.—Cornwall *Ichneumonidae* novelties; Rollason pp. 206-208 Entomologist 44.

New Forest *Ceropales variegatus*; Nevinston p. 236 Ent. Mag. 47.

Herne hill *Ellampus truncatus*; Stenton p. 68 Ent. Mag. 47.

Scotland *Oxyura*; Cameron, 347.

Highlands *Parasitica*; Elliott p. 93 Ent. Mag. 47.

Ireland *Ichneumonidae*; Morley p. 19 Ent. Mag. 47.

Lepidoptera.

Cornwall, *Sterrhia sacraria*, p. 410, *P. livornica* and *Plusia ni* p. 411 Smith Ent. 44.

Newquay *Phryxus livornica*; Waters p. 274 Ent. 44.

Devon *P. livornica*; Metcalfe p. 411 Ent. 44.—Devonshire *L. unipuncta* and *C. exigua*; Whitehouse p. 336 T.c.—East Devon *Cateremna tenebrella*; Metcalfe p. 300 T.c.

Isle of Wight *Asteroscopus* and *Poeciloscampa*; Nobbs p. 35 Entomologist 44.

Isle-of-Wight *H. armigera*; Metcalfe p. 410 Ent. 44.

New Forest *P. livornica*; Lyle p. 365 Ent. 44.

Portsmouth; Robinson p. 69 Entomologist 44.

Eastbourne *C. nerii*; Adkin p. 66 Entomologist 44.

Petworth *Phryxus livornica*; Streeter p. 274 Entomologist 44.

Haslemere *A. iris*; Jupp p. 273 T.c.

Haslemere season; Oldaker pp. 35-37 T.c. 44; Horsham additions; White Rep. Christ's Hosp. Soc. 9 p. 21.

Surrey and Sussex *Rhopalocera* 1911; Grosvenor pp. 290-294 Ent. Rec. 23.

Surrey novelties; H. G. Champion p. 41 Ent. Mag. 47.—Surrey *P. livornica*; Joy p. 365 Ent. 44.

Surbiton *Lim. sibylla*; Lucas p. 299 Ent. 44.

Kent *V. antiopa*; Asprey p. 236 Ent. Mag. 47.

Strood *Alucitides*; Ovenden p. 36 Ent. Rec. 23.

Isle-of-Sheppey, immigrants; Walker p. 160 Ent. Mag. 47.

London city, *Chrysophanus*; Stallman p. 364 Ent. 44.

Essex *Vanessa antiopa*; Frohawk p. 35 Entomologist 44.—Essex *T. pronubana*; Conquest p. 366 T.c.—Essex *A. doubledayiaria* since 1886; Mathew p. 67 and Stiff p. 155 T.c.—Essex *Loxopera beatrixella*; Thurnall p. 260 Ent. Mag. 47.

Colchester *Corcyra cephalonica*; Harwood p. 362 Ent. 44.

West Suffolk, novelties etc.; Nurse Entomologist 44 pp. 219-221.

Tuddenham; Raven p. 275 Entomologist 44.

Wicken *Hydrilla palustris*; Tarbat p. 111 Entomologist 44.

Oxford *Pyalis lienigialis*; Walker p. 192 Ent. Mag. 47.

Rugby; Buxton p. 220 Ent. Rec. 23.—Rugby; Whitley Rep. Rugby School Soc. 1910 pp. 59-73.

Wolford etc.; Wheeler Ent. Rec. 23 pp. 164-168 & 210-212.

Gloucestershire novelties; Clutterbuck p. 155 & p. 227 Entomologist 44.—Gloucestershire novelties; Davis p. 245 Ent. Rec. 23.—Gloucestershire; Bird pp. 55-58 T.c.

Gloucester *Phtheochroa schreiberiana*; Clutterbuck p. 69 Entomologist 44.

Staffordsh. novelties; Bostock pp. 106, 107 Rep. N. Staff. F. Club 45.

Notts *Plusia moneta*; Alderson p. 192 Ent. Mag. 47.

Boston *Deilephila galii*; Pilcher p. 192 Ent. Mag. 47.

Yorkshire *X. zollikoferi*; Porritt p. 19 Ent. Mag. 47.

Leeds *Xylophasia zollikoferi*; Wigin p. 34 Entomologist 44.

York at light; Mellows p. 274 Ent. 44.

Cheshire *Rhopalocera*; Nicholson p. 283 Lancash. Nat. 4.

Birkenhead *C. celerio*; Rylands p. 252 Entomologist 44.

Liverpool; Mansbridge, 1501.

Blackburn *Rhopalocera*; Western p. 273 Lancash. Natural. 4.

Kendal; Littlewood pp. 71-74 Entomologist 44.

Aberdeen *Sterrha sacraria*; p. 299 Ent. 44.

Highlands; Jackson, 1109.

Glen Tilt, short list; Conquest p. 155 Entomologist 44.

Forres and Rannoch; Reid p. 368 Ent. 44.

Moray *Mamestra persicariae*; Holmes Tarn p. 225 Entomologist 44.

Caithness, *Acherontia*; Evans p. 119 Ann. Scott. Nat. Hist. 20.

Shetland *V. cardui*; Waterston p. 217 Ent. Mag. 47.

Trichoptera & Neuroptera.

Ingleton Trichopt; Naturalist 36 p. 326.

Tadcaster; Porritt T.c. p. 379

Suffolk *Rhaphidia cognata*; Morton p. 112 Ent. Mag. 47.

Diptera.

New Forest *Ctenophora flaveolata*; Ashby p. 236 Ent. Mag. 47.

Perthshire novelties; Carter p. 69 Ent. Mag. 47.

Scotland *Hybos culiciformis* etc.; Carter p. 161 Ent. Mag. 47.

North Scotland; Yerbury p. 185 Ann. Scott. Nat. Hist. 20.

Ireland, *Hyetodesia variegata*; Trevelyan p. 136 Irish Nat. 20.

Aphaniptera.

London *Xenopsylla cheopis*; Rothschild p. 68 & p. 113 Ent. Mag. 47.

Hemiptera.

New Forest *Gastrodes abietis*; Hamm p. 161 Ent. Mag. 47.

Kent *Aphidae* list; Theobald, 2513 & 2514.

Woking; Saunders p. 94 Ent. Mag. 47.

Oxford; Collins p. 278 Ent. Mag. 47.

Mallophaga.

Shetland *Nirmus uncinus*; Waterston p. 236 Ent. Mag. 47.

Thysanoptera.

Northumberland moors; Bagnall p. 240 Ent. Rec. 23.

Odonata.

New Forest; Lucas, 1455.

Rugby; Whitley Rep. Rugby School Soc. 1910 p. 74.

Yorkshire *Libellula fulva*; Porritt p. 193 Ent. Mag. 47.

Cheshire and Lancashire; Lucas p. 102 Entomologist 44.

Scotland; Evans, 710.

Orthoptera.

Surrey; Lucas, 1451.—Surrey *Phasgonura viridissima*; Lucas p. 113 Entomologist 44.—Surrey; Lucas p. 187 T.c.

Scotland *Anisotabis*; Brown p. 25 Ent. Rec. 23.

(e) Central and Eastern Europe.

Insecta, collectively.

Poulsen, 1937; environs of Varde.

Bondroit, 212; Belgium various notes.

Jung, 1197; Ober-Elsass.

Küster, 1321; Zoocecidien Kiel.

Lucas, Entomologist 44 p. 356; Switzerland short list.

Kohn, 1283; Insektenbesiedlung Wiens.

Krulikovskij, 1317; Insekten des Gouv. Vjatka (Russ.).

Zykov, 2799; Zur Fauna des Gebietes der Don'schen Kosaken.

Coleoptera.

Hansen, 1007; The Scydmaenidae of Denmark (Danish).

Johansen, 1170; Catalogue of Staphylinidae new for the Danish fauna (Danish).

Petersen; København, Flora og Fauna 1910 p. 58; *Trichius fasciatus* new to the Danish fauna (Danish).

Everts, 713; Für die Niederländische Fauna neu.

Guilleaume, p. 165 Ann. Soc. ent. Belgique 55; Belgium *Conopalpus brevicollis*.—Guilleaume p. 308 Ann. Soc. ent. Belgique 55; novelties.

Liebmann, 1424; Ausflug auf den Grossen Belchen.

Andreae, 33; Des Brohltals.

Bernhauer, 158; Deutsche *Atheta* 2 spp. n.

Breit, 258; 6 spp. n.

Gerhardt, 839; *Lathridius campicola* n. sp.—Gerhardt, 840; *Lathridius* n. sp.—Gerhardt, 841; Neuheiten schlesischen, also Jahresh. Insektenk. Insektenk. Breslau H. 4 pp 1-3.

Hartmann, 1010; Badens Käferfauna.

Kolbe; schlesischen Käferfauna; Breslau Jahresh. Ver. Insektenk. H. 4 pp. 7-12.

Kuhnt, 1324 & 1325; Illustrierte Tabellen Deutschlands.

†Quiel, 1963; *Ataenius* sp. n.Reeker; Westfalen; *Carabus irregularis*; Münster Jahresber. ProvVer. Wiss. 39 p. 10.

Röttgen; des Laacher Sees; Bonn SitzBer. Ver. 1910 1911 pp. 45-46.

Seriba, 2249; Heilbronn und Karlsruhe *Euthia*.

Scherdlin, 2175; Elsässischen.—Scherdlin, 2174; Strassburger Stadtmwallung.

Born, 229; Carabenfauna des Weisensteins.

Bourgeois; Coléoptères alpins.

Hustache, Echange 27 p. 34; Dole et Haut-Jura.

Fuchs, 810; Bavaria *Pityogenes* sp. n.Bernau, 155; Tolmein *Cicindelidae* und *Carabini*.Bernhauer, 160; *Atheta* sp. n.Breit, 259; Ungarn *Anophthalmus* 2 spp. n.Csiki, 531; Ungarn *Pholeuon* spp. n.—Csiki, 530; Ungarn, many novelties.—Csiki, 532; Ungarn 3 spp. n., *Anophthalmus*, *Drimeotus*, *Pholeuon*.—Csiki, 533; Karpathen.—Csiki, 534; Ungarn, *Anthaxia*.Ganglbauer, 826; *Trechus* spp. n., Ostalpen.Hubenthal, 1128; Austria 2 spp. n. *Phyllodrepa* and *Mordellistena*.Meixner, 1555; *Trechus* sp. n. Steiermark.Mihók, 1601; Ungarn *Anophthalmus* n. spp.Penecke, 1820; *Aphodius* und *Quedius* spp. n. Bukowina.

Prossen, 1948; Verzeichnis Kärnten.

Reitter, 2000; Mähren *Pterostichus* sp. n.Reitter, 2006; *Agaricophilus* sp. n. Tatra. 2007; *Haliphus* sp. n. Bregenz.

Schatzmayer, 2161; Villacheralpe.

Seitner, 2254; Dachstein *Polygraphus* gen. n.Sokolar, 2355; Austria *Carabus* sp. n.

Stiller, 2382; Höhlenexkursionen im kroatischen Montangebiet.

Szombathy, 2500; Elateriden Ungarn.

Łomnicki, 1436; *Philydrus* de Pologne (Polish).

Benderitter, 135; *Aphodius* Russie.

Bernhauer, 161; *Euphanias* sp. n. Krim.

Lutshnik, 1470; russische Cicindeliden und Carabiden (Russ.).—**Lučnik, 1458;** Gouv. Kaluga, *Carabidae*, *Cicindelidae* (Russ.).—**Lučnik, 1459;** Terek-Gebiet, *Cicindelidae* et *Carabidae* ab. n. (Russ.).

Mikutowicz, 1602; Koleopteren der Ostseeprovinzen.

Miller u. Zubovskij, 1604; Bessarabien, *Etateridae* und *Buprestidae*.

Reitter, 2008; *Caulomorphus* sp. n. Svanetien.

Roubal, 2097; *Aphodius* sp. n. Volhynia.

Sagovskij, 2126; Wiborg Silphiden (Russ.).

Suvorov, 2485; Gebiet Uralsk, *Comptosiorcadion* sp. n.

Hymenoptera.

Bondroit, 213; Belgium imported *Formicidae*.

Smits van Burgst, 2346; Holländischer Microhymenopteren.—**Smits van Burgst, 2347;** *Stephanus serrator* im Holland.—**Smits van Burgst, 2348;** Dutch *Ichneumonidae*.

Dittrich, 595; Verzeichnis Schlesien.

Enslin, 691; Neues Siriciden-Genus Deutschland.

Habermehl, 993; Germany *Cryptini* spp. n.

Pfankuch, 1841; Germany *Metopiini* gen. n.

Torka, 2543; Provinz Posen.

Ulbricht, 2588 & 2589; Ichneumonidenstudien spp. n.

Ford, 761; Geneva *Monomorium* sp. n.

Frey-Gessner, 779; Fauna Helvetiae, *Apidae*.—**Frey-Gessner, 780;** Valais.

Alfken, 21; Ungarn *Andrena* n. sp.

Enslin, 690; *Pachynematus* Südtirol.

Móczár, 1615; Ungarn Kiskúnfélégyháza.

Szépligeti, 2495; Hungary *Ophioidae* 3 spp. n.

Niezabitowski, 1731; Braconides de la Pologne. (Polish.)

Śnieżek, 2353; *Apidae* Galicie. (Polish.)

Kurdiumov, 1333; Poltava, *Trichogrammatidae* g. n. spp. n.

Lepidoptera.

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Jensen, 1164; Environs of Køge (Danish).

Knudsen, 1282; Denmark (Danish).

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Auel; *Dasychira pudibunda* color bei Potsdam; Zs. wiss. Insektenbiol. 7 p. 191.

Bauer, 120; Deutschland neue *Dianthoecia*.

Borgers, 226; *Psychiden*, Krefelder.

Cornelsen; *Catephia alchymista* im Ruhrgebiet; Zs. wiss. Insektenbiol. 7 p. 323.

Dadd, 543; Germany, *Acidalia* sp. n.

Füge, 812; Microlepidopteren von Halle.

Hartwig Ent. Zs. Frankfurt 25 pp. 109–115; Umgebung Braunschweigs.

Hoffmann; Verbreitung unserer Tagfalter; Ent. Jahrb. 21 p. 129.—**Hoffmann;** Tagebuche 1909 Umgegend v. Krieglach; Intern. ent. Zs. Guben 4 pp. 227–229 233–234.

Jäckel; *Agrotis collina*, Oberlausitz; D. ent. Zs. Iris 25 p. 102.

Jammerath, 1155; Verzeichnis Osna-brück und Umgegend.

Kraemer, 1300; Mittelfranken.

Kunze, 1328; Tagfalter Anhalts.

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Bethune-Baker, 171; Berisal excursion.—**Bethune-Baker**, 172; Hospenthal.—**Bethune-Baker** Ent. Rec. 23 pp. 77-79; Gondo and Loquinthal short excursion.—**Bethune-Baker** T.c. pp. 41-43; Eclépens, short trip.—**Bethune-Baker** T.c. p. 234; Saas-Fée, brief note.

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Gauckler, 832; Exkursion, Tarasp.

Gottrau, Mem. Soc. Fribourg 1; Macrolépidoptères, Fribourg.

Gramann & Ziegler-Reinacher, Mitt. Ges. Frauenfeld 19; Grossschmetterlingen des Kt-Thurgau.

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Wehrli, Mitt. Schweiz. ent. Ges. 12; Schweiz neue.

Wheeler Ent. Rec. 23 pp. 265-267 288-290 311-314; Switzerland excursion.

Griebel, 935; Der bayerischen Rheinpfalz.

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Dietze Int. ent. Zs. 5 p. 32; *Eupithecia*, aus Süd-Tirol.

Hafner, 995; Verzeichnis Krain Grossschmetterlinge.

Hellweger, 1041; Nordtirols.

Höfner, 1077; Kärntens.

Hoffmann, 1079; Ausflug ins steirische Unterland.

Keynes & Keynes, 1230; Hungary, *Rhopalocera*.

Krone, 1316; Oesterreich-Ungarn, novelties, 2 spp. n., *Elachista* and *Lithocolletis*.

Mitterberger, 1609; *Pamene*, österreichischen Alpenländern.

Pieszczyk, 1896; Judenburg in Steiermark.

Preissecker, 1941; *Scythris* n. sp. Niederösterreich.—**Preissecker** Verh. z.-b. Ges. Wien 61 p. 52; *Endrosa roscida fumosa* und *Nonagria neza* neu für Oesterreich.

Rebel, 1984; Triglav und Orna Prst in Krain.—**Rebel**, 1983; Monte Maggiore, Istrien.

Rothschild, 2086; Hungary, *Crambus* 2 spp. n.—**Rothschild**, 2090; Ungarn, novelties.

Schmidt, 2185; Ungarn, novelties.

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Brunicki, 296; Liste de lépidoptères, Stryj.

Wawerka, 2704; Ostrau-Karwiner Kohlerrevieres.

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Sitowski, 2321; Lépidoptères des Pieniny.

Stöckl, 2389; Umgegend von Lemberg, Janów, Mikuliczyn u. Worochta.

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Janata, 1156; Gouv. Cherson (Russ.).

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Slaščevskij, 2335; Gouv. Warschau.

Voronevskij, 2656; Gouv. Orenburg (Russ.)

Trichoptera.

Dziędzielewicz, 651; *Rhyacophila* n. sp. (Polish.)

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Neuroptera.

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Navás, 1694; Gouv. Moskau *Boreus* spp. n.—**Navás, 1696**; Krim, *Myrmelconidae* sp. n., *Chrysopidae* sp. n.

Diptera.

Meyere, 1581; Niederländische Culiciden sp. n.

de Meyere, 1583; Netherlands *Con-tarinia* sp. n.

Goetghebuer, 899; Belgium, *Chironomidae* 3 spp. n.

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Enderlein, 683; *Oscinosoma* neue deutsche.—**Enderlein, 684**; Germany *Joannisia* sp. n.

Kieffer, 1241; Nouvelles Chironomides.—**Kieffer, 1248**; Germany, groupe *Orthocladus* spp. n.

Kramer, 1301; Tachiniden der Oberlausitz.

Michl, 1599; *Chilosia* sp. n. Schlesien.

Schroeder, 2217; Pommern. III.

Speiser; *Lispa hydromyzina* in Ostpr.; Königsberg Schr. physik. Ges. 51 p. 306.

Czišek, 542; *Tipulidae* Moraviae.

†**Handlirsch, 1004**; Miocän Krain, *Bibio* sp. n.

Landrock, 1354; Mähren, *Mycetophilidae* 2 spp. n. gen. n.

Lundström, 1467; Hungary-Austria, *Mycetophilidae* n. spp.

Pillich, 1898; Ungarn Simontornya.

Thalhammer, 2509; Hungary *Empidideicus* n. sp.

Jaroševskij, 1159; Fauna des Gouv. Charkov (besonders *Diptera*, *Ichneumonidae*).

Kosminskij, 1295; Gouv. Moskau *Syrphidae* (Russ.).

(N-9186 j)

Aphaniptera.

†**Dampf, 547 & 548**; *Palaeopsylla* sp. n.

Jordan & Rothschild, 1190; Russia and Caucasus 2 spp. n.

Hemiptera.

Jensen-Haarup København Flora og Fauna 1910 p. 59; *Oliarius leporinus* new to the Danish fauna. (Danish).—**Jensen-Haarup** København Flora og Fauna 1910 p. 59; *Mesovelica furcata* and *Heterotoma merioptera* new to the Danish fauna. (Danish.)

Goot, 902; Liste der niederländischen Aphididen.

Hüeber, 1129; Synopsis der deutschen *Plagiognatharia*.

Kuhlgatz, 1323; Aquatilen Rhynchoten Westpreussens.

Schirmer, 2179; Umgebung Berlins, speziell der Bukower Gegend.

Schumacher, 2238; Germany Hessen-Nassau.—**Schumacher, 2239**; Deutschlands, *Lygaeidae*.—**Schumacher, 2241**; Oldenburg, Ostfriesland u. Baltrum.—**Schumacher, 2242**; Hemipteren-Fauna Schlesiens.—**Schumacher, 2243**; Die märkische Pentatomiden-Fauna.—**Schumacher** Zeitschr. wiss. Insektenbiol. 7 p. 289; *Poeciloscytus*.

Smreczyński, 2349; Liste Gorcy en 1909.—**Smreczyński, 2350**; Liste des Hémiptères de la Galicie. (Polish.)

Cholodkovsky, 414; Russia *Chermes* sp. n.

Kiritshenko, 1265; Bemerkungen über russische Hemipteren. (Russ.)

Thysanoptera.

Bagnall, 79; Denmark *Hindsiana* sp. n.

Psocoptera.

Rosen, 2076; Copeognathen Ostpreussens.

Odonata (or *Paraneuroptera*).

Petersen Ent. Medd. p. 221; *Somatochlora arctica* in Denmark (Danish).

Keilhack, 1211; Helgoland.

le Roi, 1397; Brandenburg.—**le Roi, 1398**; Ostpreussen.

Bartenev, 109; Syr-darja-Gebiet
Calopteryx sp. n. (Russ.)

Brauner, 252; Bessarabien (Russ.).

Plecoptera.

Ussing, 2596; Biological and faunistic observations, Danish Plecoptera. (Danish.)—**Ussing** København Flora og Fauna 1911 p. 108; *Perla cephalotes* in the Grejsdal (Jutland). (Danish.)

Orthoptera.

†**Burr, 323;** *Forficula* spp. n.

La Baume Ent. Rdsch. 28 p. 159; Westpreussen.

Ramme 1974; Mark Brandenburg.

†**Shelford, 2284;** Amber *Blattidae* spp. n.

Ikomicov, 1136; Fundorte Acridio-deen im Russischen Reich, *Gomphocerus* sp. n.

Štelkanovcev, 2158; Krim, Gebiet der Don'schen Kosaken, *Poecilimon* spp. n. (Russ.)

Šugurov, 2466; Krim (Russ.).

Voroncovskij, 2657; Locustodea Orenburg (Russ.).

(f) **France.**

Insecta.

Brandicourt, 248; Monts de Bretagne.

Cotte, 500; Cécidies des chênes des Maures.

Cotte, 501; Cécidies à Vichy.

Gavoy, 833; Inondations, Carcassonne.

Houlbert, 1113; Faune armoricaine.

Lucas, 1452; *Neuroptera* s.l., short list.

Coleoptera.

Barthe; *Carabus* de l'Aude; Misc. ent. 18 p. 18 etc.

Bouly de Lesdain; Dunkerque; Feuille jeunes natural. 41 p. 182.

Clermont, 429; *Mascarauxia cyrtica* Landes.

Sainte-Claire Deville, 2129; *Staphylinidae* du bassin de la Seine.

Sainte-Claire Deville, 2130; *Octavius* sp. n.

Gozys, 911; *Helopides*.

Joy p. 16 Ent. Mag. 47; *Cryptophagus fowleri*.

Lambertie Actes Soc. Linn. Bordeaux 64 p. 83; *Apion chevrolati* et *Gronops lunatus*.

Lapouge; *Carabus* de la Montagne noire; Misc. ent. 18 1910 p. 60 etc.

Peneau, 1818; Loire-Inférieure.

Pic, 1852; Notes, Malachiides.

Vuillet, 2673; *Trichopterygidae* gen. n. Soudan français.

Hymenoptera.

Cadro, 340; Département du Nord.

Lepidoptera.

Chrétien, 419; Nouveaux.

Cotte Marseille Bul. soc. linn. 2 pp. 62-64; Provence.

Homberg, 1099; Nouvelle *Acidalia*.

Le Cerf, 1372; *Sesia* sp. n.

Postel, 1933; *Arctiidae*, septentrionale.

Postel, 1934; *Plusia* de la Haute-Picardie.

Rondou, 2074; *Psychidae* pyrénéennes.

Rowland-Brown, 2110; Basses Alpes and Isère *Rhopalocera* excursion.

Rowland-Brown, 2111; Charente, Angoulême, Basses-Pyrénées, Gironde; *Rhopalocera*.

Neuroptera.

Navás, 1689; Saint-Nazaire (Loire-Inférieure).

Diptera.

Lesne, 1406; *Chionea* en Alsace.

Villeneuve, 2640; *Drosophila* sp. n.

Lesne Feuille jeunes natural. 41 p. 89; Mulhouse.

Hemiptera.

Lambertie, 1349; Nouveaux Gironde. —**Lambertie;** Sud-ouest; Misc. ent. 17 1909 18 1910 p. 103.—**Lambertie** Misc. Ent. 19 p. 25; Hémiptères

hétéroptères, Cicadines et Psyllides du sud-ouest de la France (2 listes d'Addenda et Corrigenda.

Lombard Marseille Bul. soc. linn. 2 p. 83; *Galeatus komaroffi*.

Mercier, 1564; Notonectes de Nancy.

Pionneau; Gard; Misc. ent. 18 p. 69.

Orthoptera.

Burr Bul. Muséum Paris 1911 pp. 102-105; Bagnoles de l'Orne.

Lambertie Misc. ent. 18 p. 17; *Mantis religiosa* var. brune, Gironde.

Letacq, 1415; *Grillus burdigalensis* Alençon.

(g) South Europe and Mediterranean Basin.

Insecta, collectively.

Padovani, 1789; Il plancton del fiume Po.

Tölg und Fahringer, 2534; Dipteren Hymenopteren Bosniens, Herzegowin und Dalmatien.

Pongrácz, 1910; Creta, *Pseudoneuroptera* et *Neuroptera*.

Holl, 1088; Notes, Algeria.

Coleoptera.

Bolívar, 207; Spain *Speocharis* sp. n.

Escalera, 702; Spain *Dorcadion* 3 spp. n.

Heikertinger, 1032; *Psylliodes* spp. n. Nordwestspanien.

Jeannel, 1161; *Bathysciinae* cavernicoles des Pyrénées espagnoles.

Kuntzen, 1326; Zwei neue spanische Timarchen.

Schramm, 2214; Spain *Dorcadion* sp. n.

Cecconi, 385; Isola Pianosa.

Beffa, 128; *Anomala* Torino.—Beffa, 130; Piemonte.—Beffa & Gagliardi, 131; Toscana.

Depoli, 567; Liburnia.

(N-9186 j)

Leoni, 1393; Italia, nuove o rare, *Sphenoptera* sp. n.—Leoni, 1392; *Asida* 9 spp. n.

Luze, 1476; *Anthobium* und *Mycetoporus* spp. n. Italien.

Luigioni & Tirelli, 1466; Coleotteri del Lazio omessi nel Catalogo del Bertolini.

Porta, 1922; Italia, *Scaritini*: 1923; Italia, *Donaciini*.

Teodoro, 2505; *Coccinellidae Chilocorinae*, Padova.

Wichmann, 2743; *Hylastes* sp. n. Vallombrosa.

Champion, 392; Sardinia excursion.

Formánek, 768; Sardinien *Curculionidae* 4 spp. n.

Krausse, 1308; Sardegna novelties.—Krausse; Sardische Borkenkäfer; Ent. Bl. 7 pp. 67-68.

Reitter, 2013; *Clambus* sp. n. Sardinien.—Reitter, 2015; Sardegna, *Langelandia* sp. n., *Macroplea* sp. n.

Wichmann-Rosenhof, 2745; *Hypotherenus* sp. n. Sardinien.

Gestro Boll. Soc. ent. Ital. 41 p. 54; *Polyconia spinicornis* Sicilia.

Ragusa, 1972 & 1973; Sicilia, *Agriotes* sp. n.

Vitale, 2648; Nuovi o rari Sicilia.

Gridelli, 934; D'un tronco di quercia.

Bernhauer, 162; *Mayetia* und *Octavius* spp. n. Herzegowina.

Breit, 257; *Laemostenus* sp. n. Kephallonia, *Adelopidius* sp. n. Bosnia.

Krekich, Mayer & Müller, 1311; Isola d'Arbe.

Matits, 1534 & 1535; Serbien *Molops* spp. n.

Meixner, 1554; Sammelexkursion Herzegowina.

Holdhaus, 1086; Dalmatien *Trechus* sp. n.

Müller, 1663; Bosnischer *Parapropus* sp. n.

Müller, 1665; Dalmatia 5 spp. n., *Chennium*, *Hydraena*, *Dyschirius*, *Patrobis* und *Staphylinus*.

Müller, 1664; Osterr. Karst, Höhlenkäfer, spp. n.—Müller, 1666; Zwei neue Höhlensilphiden Karstländern.

Müller, 1667; Dalmatia sp. n.

Müller, 1668; *Brachynus* des Küstenlandes und Dalmatiens.

Reitter, 2001; Zwei Grottsilphiden, Bosnien.

Reitter, 2002; *Charonites* sp. n. Bosnia.

Szombathy, 2501; Bosnien *Corymbites* n. sp.

Luze, 1478; *Philonthus* sp. n. Türkei.

Zürcher, 2796; *Colpotus* sp. n. Cypern.—Zürcher, 2797; *Danacaea* sp. n. Chypre. Zürcher, 2798; Chypre et 4 spp. n.

Bénard, 134; *Rhyssemus* nouveau du Maroc.

Bourgeois, 237; Nouvel *Haplcnemus* marocain.

Cros, 520; *Meloe* Algeria.

Escalera, 703; Marruecos *Heteromera* 6 spp. n.

Normand, 1738; Tunis 2 spp. n. *Mimocete* and *Chevroletia*.

Peyerimhoff, 1836; Djurdjura *Paraleptusa* sp. n.—Peyerimhoff, 1836; Nord Afrique cavernicole, Djurdjura *Carabidae* gen. n.—Peyerimhoff, 1839; Sud-Oranais *Tenebrionidae* 2 spp. n., gen. n.

Pic, 1863; Nord de l'Afrique *Longitarsus* sp. n.

Pionneau Feuille jeunes natural. 41 p. 151; Tunis *Dichirotrichus pubescens*.

Théry, 2520; Algeria *Sphenoptera* sp. n.

Reitter, 2011; *Alphitophagus* sp. n. Kleinasien.

Strepsiptera.

Hofeneder, 1078; Algier gen. n.

Hymenoptera.

Forel, 758; Fourmis nouvelles.

Mercet, 1563; Spain *Chalcid*. 2 spp. n.

Lepri, 1396; *Chrysididae* del Lazio.

Mantero, 1502; Isola dell' Asinara.

Masi, 1525; *Chalcididae* italiani spp. n.

Zavattari, 2789; Alpi del Piemonte.

Krausse-Heldrungen, Boll. Soc. Entom. Ital. 41 pp. 14–18; Sardinia *Formicidae*.—Krausse-Heldrungen Wien ent. Ztg. 30 p. 168; *Formica*-Arten auf Sardinien.

Graeffe, 913; *Vespidae* des Küstenlandes.

Graeffe, 914; *Heterogyna* des Küstenlandes.

Santschi, 2145; Roumania *Cardicondyla* sp. n.

Mocsáry, 1616; Creta *Chrysis* n. sp.

Cockerell, 456; Cyprus *Andrena* sp. n.

Buysson, 336a; Mauritanie occidentale 2 spp. n., *Chrysis* and *Pseudomera*.

Kieffer, 1234; Tangier *Proctotrypidae* 6 spp. n.

Olivier, 1767; N. Africa.

Santschi, 2141; Nouvelles fourmis de Tunisie.

Turner, 2581; Algeria *Palarus* sp. n.

Santschi, 2144; Tunis *Leptothorax* sp. n.

Saunders & Morice, 2157; Algeria *Sphegidae* long list, spp. n.

Strand, 2444; Algier *Melecta* sp. n.

Forel, 765; Jerusalem *Pheidole* sp. n.

Lepidoptera.

Demaison, Bull. Soc. ent. France 1911 p. 402; des grottes de la Catalogne.

Grünberg, 976; *Lasiocampa* Spanien.

Jones, 1175; S. Spain *Rhopalocora*.

Walsingham, 2688; Granada *Sym-moca* sp. n.

Bethune-Baker Ent. Rec. 23 pp. 206–208; Macugnaga short excursion.

Costantini, 497; Nel Modenese.—Costantini, 498; Montegibbio, Modena.—Costantini, 499; *Hylophila* sp. n.

Perlini, 1829; Monferrato.

Pionneau, 1899; Liste, Sicile et Sardaigne.

Rostagno, 2082; Faunae Romanae.

Rostagno & Zapelloni, 2080; *Lycanidae* et *Hesperidae* Faunae Romanae.—**Rostagno & Zapelloni, 2081**; *Rhopalocera*, Faunae romanae.

Turati, 2568; Italy *Harmodia* and *Phycita*, sp. n., Sardinia *Herminia* sp. n., Sicily *Crambus* sp. n.

Turati, 2570; Sardinien n. spp. *Ephyra*, *Nola*.

Turati & Verity, 2571; Valderia.

Graeffe, 912; *Fossores* des Küstenlandes.

Schawerda, 2168; Bosniens und Herzegowina.

Stauder, 2368; Adriatischen Küstengebiete.

Graves, 931; Constantinople.

Andres, 35; Marioutwüste bei Alexandrien.

Chrétien, 420; Nord de l'Afrique.

Chrétien, 422; Trois Pyralides de Mauritanie.

Chrétien, 423; Nouveaux genres et espèces de Phycides de Mauritanie.

Dupont, 629; Algérie *Noctuidae* gen. n.

Gibbs, 853; *Rhopalocera*.

Joannis, 1166; Liste Tunisie et Bou-Saada.

Lucas, 1444; Tunisie *Pyralidae* 5 spp. n.

Oberthür, 1745; N. Africa.—**Oberthür, 1754**; Algeria *Chadocera* sp. n.

Olivier Bul. Soc. ent. France 1911 p. 246; *Acherontia atropos* en Tunisie.

Rothschild, 2091; Algeria spp. n., *Eublemma Cucullia*, *Scodiona* and *Phragmatobia*.

Walsingham, 2687; Algeria *Tineidae* 7 spp. n., genn. n.

Herzog, 1058; Aegypten und Syrien.

Graves pp. 31–36 Ent. Rec. 23; Syria, continuation from last year.

Courvoisier, 505; Amasia *Lycaena* sp. n.

Le Cerf, 1373; Amasia *Sesia* sp. n.

Rebel, 1986; Syrien, spp. n.

Neuroptera.

Navás, 1695; Maroc *Lertha* sp. n.

Navás, 1686; Algeria *Chrysopa* sp. n.

Navás, 1698; Egypt *Macronemurus* sp. n.

Diptera.

Becker, 125; *Stenopogon* sp. n. Andalusien.

Tuccimei, 2561; Provincia di Roma.

Schnabl, 2196; Korsika, *Anthomyidae*, spp. n.

Villeneuve, 2637; Deux Asilids nouveaux Corse.

Villeneuve, 2638; Korsika, *Tachinidae*, spp. n.

Hendel, 1045; *Otitis* 4 spp. n.

Newstead, 1717; Malta *Phlebotomus* 3 spp. n.

Bezzi, 181; Tunisie *Scleropogon* n. sp.

Sack, 2124; Algeria, *Pycnomalla* sp. n.

Collin, 462; Egypt, *Agromyza* sp. n.

Villeneuve, 2641; *Atylomia* sp. n. Egypten.

Hemiptera.

Guercio, 984; Penisola Iberica, *Afididi*, spp. n.

Gräffe, 915; Küstenlandes.

Bergevin, & Théry, 140; Liste Algérie.

MacGillavry, 1490; Algerien und Tunesien.

Marchal, 1503; Algérie *Aspidiotus* sp. n.

Newstead, 1718; Egypt *Coccidae* spp. n.

Poppius, 1915; *Raphidosoma* spp. n. Palästina, and Aegypten.

Psocoptera.

Rosen, 2077; Italy *Troctes* sp. n.

Embioptera & Isoptera.

Krausse, 1307; *Embia* von Sardinien.

Silvestri, 2311; Isoptera Tunis spp. n.

Orthoptera.

Wolff, 2770; Sardinia *Platycleis* sp. n.

Shelford, 2281; Tunis *Blattidae* 2 spp. n., gen. n.

Burr, 322; Cairo *Diplatys* sp. n.

(h) *Caucasus, West & Centr. Asia.*

Insecta, collectively.

Fuchs, 809; Forschungsreise gesamten Insekten.

Kiseritzky, 1269; Insekten des Gebiets der Don'schen Kosaken (Russ.).

Coleoptera.

Aulmann, 53; Transkaspien, Sammelreise.

Bernhauer, 159; 3 spp. n. Turkestan, *Staphylinus*, *Achenium* and *Bledius*.

Kerremans, 1224; Buprestides 4 spp. n.—**Kerremans, 1226**; Persia *Lampetis* sp. n.

Lesne, 1399; *Lyctus* sp. n.

Luze, 1475; *Lathrimacrum* spp. n. Kaukasus.—**Luze, 1477**; *Medon* sp. n. Kaukasus.

Netolitzky, 1707; Persia *Bembidion* sp. n.

Reineck, 1998; Syria *Macrolenes* sp. n.

Reitter, 2009; *Gynandrophthalma* und *Phloeonomus* spp. n. asiat. Türkei.—**Reitter, 2010**; *Nanophyes* sp. n. Transkaukasus.—**Reitter, 2012**; *Phytoecia* 3 spp. n. Transkaspien.—**Reitter, 2014**; *Rhynchaenus* spp. n.

Roubal, 2098; *Olophrum* sp. n. Kaukasus.

Schmidt, 2184; Centr. Asia *Heptaulacus* sp. n.

Spaeth, 2359; Arabien gen. n. *Cassididae*.

Suvorov, 2484; Russisch Centralasien und Mongolia *Compsodorcadion* spp. n.—**Suvorov, 2486**; Mongolei *Stephanocleonus* spp. nn.

Hymenoptera.

Buysson, 336; Asie centrale.

Meade-Waldo, 1543; Persia *Polybia* 2 spp. n.

Lepidoptera.

Bastelberger, 118; Tibet *Urapteryx* sp. n.

Čugunov, 536; Macrolepidopteren der Baraba-Steppe (Russ.).

Le Cerf, 1371; *Sesia* sp. n.

Stichel, 2381; n. spp. & subspp., *Colias*, *Thestor*, *Cerura*, *Antitype*, *Dieida* g. n.

Neuroptera.

Navás, 1697; *Araxestal Mantispa* sp. n.

Hemiptera.

Kiričenko, 1263; Syr-Darja-Gebiet, *Haploprocta* sp. n.—**Kiričenko, 1264**; Pamir Tibet, Mongolia, *Acanthia* spp. n.

Melichar, 1558; *Eupteryx* sp. n. Kleinasien.

Montandon, 1626; Turkestan *Aphe-locherius* sp. n.

Isoptera.

Vasiljev, 2612; Kreis Merw und Syr-darja-Gebiet, *Hodotermes* spp. n.

Odonata (or Paraneuroptera).

Bartenef, 108; spp. n.—**Bartenev, 109**; *Calopteryx* 2 spp. n. (Russ.).—**Bartenev, 110**; *Odonata* Transkaukasiens (Russ.).—**Puschig 1954**; Süd-ostrussland.

Orthoptera.

Konnikov, 1137; Semiretshje-Gebiet *Stenobothrus*, *Stauroderus*, *Bryodema*, spp. n.

Pylinov, 1955; Semiretshje-Gebiet, Mantodea, Phasmatodea, Locustodea, Gryllodea; *Olynthoscelis* sp. n. (Russ.).

Uvarov, 2599; Orthopteren der Kirgisensteppen, *Gryllodes* sp. n.

Africa.

Insecta, collectively.

Kellogg & Paine, 1218; *Anoplura* and *Mallophaga* spp. n.

Longstaff, 1437; Sudan excursion.

Simpson, 2316; West Africa.

Coleoptera.

Arrow, 44; gen. n. *Orphninae*.—Arrow, 45; White Nile *Dynamopus* sp. n.—Arrow, 46; *Dynastinae* 4 spp. n.

Aulmann, 55; 2 spp. n., *Schizonycha* and *Camenta*.

Aurivillius, 58; Africa trop. *Cerambycidae* 2 genn. n. 23 spp. n.

Bickhardt, 183; Deutsch-Ostafrika Histeriden 10 spp. n.—Bickhardt, 185; Histeriden 2 spp. n.—Bickhardt, 186; Neue Histeriden.

Boileau, 200; Trop. Africa *Nigidius* sp. n.

Distant, 593; S. African *Cetoniidae*.

Dupuis, 632; *Omophron* 2 spp. n.

Eichelbaum, 667; Käferlarven und Puppen.

Felsche, 726; *Copridae* 2 spp. n.

Gestro, 849; Paussidae della Colonia eritrea.

Gillet, 862; *Copridae* 6 spp. n. 2 genn. n.

Grouvelle, 964; *Trachypolis* sp. n.—Grouvelle, 967; *Helminthidae* Afrique orientale et centrale.—Grouvelle, 968; 2 spp. n. *Meligethes*, *Cryptarcha*.—Grouvelle, 969; *Diphyllus* sp. n.—Grouvelle, 971; *Pycnomerus* sp. n.

Hintz, 1074; *Cerambycidae* spp. n., genn. n.

Horn, 1101; *Cicindela* sp. n.

Jordan, 1183; St. Thomé *Anthribidae* 3 spp. n.—Jordan, 1184; *Litocerus*, *Acorynus*, *Phloeotragus* 6 spp. n.

Kerremans, 1225; 15 spp. n. *Buprestidae*.—Kerremans, 1226; *Psiloptera* and *Oedisterna*, 23 spp. n.

Kolbe, 1287; 3 spp. n.

Lesne, 1414; *Bostrychidae*.

Lewis, 1420; *Histeridae* 6 spp. n.

Marshall [in] King, 1258; *Baris* sp. n.—Marshall, 1516; Sudan *Baris* sp. n.

Mocsáry, 1617; *Chrysididae*, spp. n.

Möllenkamp, 1620; *Metopodontus* sp. n.

Moser, 1651; *Cetoniidae* 6 spp. n., gen. n.—Moser, 1652; *Cremastochilides* 10 spp. n., gen. n.—Moser, 1654; *Cetoniidae* spp. n.—Moser, 1656; *Cetoniidae* spp. n.

Oberthür, René, 1756; Soudan français, *Cerambycidae* gen. n.

Ohaus, 1759; *Popillia* and *Anomala* spp. n.

Orbigny, 1778; Abyssinie *Onthophagus* 2 spp. n.—Orbigny, 1779; Niger-Tchad 3 spp. n.

Pic, 1844 & 1845; Chari-Tchad *Hylophilus* nouveaux.—Pic, 1846; *Scaptia* nouveaux.—Pic, 1860; Malacodernes et Hétéromères.—Pic, 1843; 3 spp. n., *Cantharis* *Hylophilus* and *Pseudocistela*.—Pic, 1864; 3 spp. n., *Lytta* and *Notoxus*.—Pic, 1871; *Megalopides* nouveaux.—Pic, 1877; *Melyridae*, sp. n.

Reitter, 2003; *Erythraea* *Xylographus* sp. n.

Schmidt, 2181; *Aphodius* nouveaux.—Schmidt, 2182; *Rhyparus* sp. n.—Schmidt, 2184; *Aphodini* spp. n.

Schubert, 2226; *Staphylinidae* spp. n.

Spaeth, 2359; *Cassididae* spp. n.

Stefani-Perez, 2372; *Bostrychus* sp. n.

Strohmeyer, 2460; neue Platypodidengattung.—Strohmeyer, 2461; Abessinien *Scolytidae* 2 spp. n.—Strohmeyer, 2464; Platypodiden spp. n.

Théry, 2520; *Buprestidae* spp. n.—Théry, 2521; *Buprestides* Nil Bleu.

Vuillet, 2663; *Platysmatini* gen. n.—Vuillet, 2662; *Rhabdotis* sp. n.—Vuillet, 2664; *Pachnoda* sp. n.—Vuillet, 2671; *Trichopterygidae* gen. n.—Vuillet, 2675; nouveau Carabide du Soudan.

Wagner, 2680; *Apion* spp. n.

Wasmann, 2699; *Staphylinidae* genn. n.

Weise, 2712; *Cryptonychus* sp. n.—
Weise, 2713; Chrysomelidae spp. n.

Wichmann, 2744; neuer abessy-
nischer *Cladoctonus*.

Strepsiptera.

Pierce, 1894 gen. n.

Hymenoptera.

Bischoff, 188; Fossoria, Chrysididae,
Stephanidae, spp. n.

Brauns, 253; *Gorytes* 2 spp. n.—

Brauns, 254; Nysson Südafrikas.—

Brauns, 255; südafrikanische *Nitela*
4 spp. n.

Cameron, 353; many spp. n., *Arge*
and *Parasitica*.

Cockerell, 456; *Apidae* spp. n.

Crawford, 514; *Proctotrypidae* and
Chalcididae spp. n.

Enslin, 696; *Tenthrediniden* spp. n.
genn. n.

Forel, 758; Fourmis nouvelles.—

Forel, 761; Congo *Cataulacus* sp. n.—

Forel, 763; Ameisen spp. n.—Forel,

766; *Formicidae* spp. n.

Friese, 781; *Prosopis* spp. n.—

Friese, 788; *Xylocopa* sp. n.—Friese,

790; Bienen spp. n.—Friese, 791;

Neue Bienen.

Girault, 886; *Trichogrammatidae*
gen. n.

Kieffer, 1234; *Proctotrypidae* 2 spp.

n.—Kieffer, 1242; *Gasteruption*, *Neo-*

stephanus, spp. n.—Kieffer, 1246;

Foenatopus sp. n.

Krieger, 1312; Süd-Kamerun und
Spanisch-Guinea, *Gabunia* spp. n.

Meade-Waldo, 1543; *Diploptera* 3

spp. n.—Meade-Waldo, 1544; *Diplo-*

ptera 9 spp. n.

Santschi, 2148; Nouvelles fourmis.

—Santschi, 2152; *Platythyrea*, *Pre-*

nolepis and *Plagirolepis* spp. n.

Stitz, 2384; *Formicidae* spp. n.

Strand, 2403; Kamerun spp. n.,

gen. n.—Strand, 2415; *Ceratina* sp. n.

Xylocopa sp. n.—Strand, 2416; *Nomia*

und *Omachthes* spp. n.—Strand, 2422;

Nomia, *Systropha* und *Tetralonia*

spp. n.—Strand, 2423; *Apidae* spp. n.

—Strand, 2424; *Megachile* spp. n.—

Strand, 2444; *Apidae* spp. n.—Strand,

2450; Kamerun, *Dorylus* sp. n.—

Strand, 2452; *Nomia* spp. n.—Strand,

2453; *Apidae* spp. n.

Szépligeti, 2498; *Braconidae* n. spp.—

Turner, 2582; *Scoliidae* 4 spp. n.—

Turner, 2583; Süd-Kamerun und

Spanisch-Guinea. *Methoca*, *Tiphia* u.

Scolia spp. n.—Turner, 2580; Boma

Elis sp. n.

Viereck, 2634; *Ichneumon* & *Bracon*

spp. n.

Wasmann, 2699; *Dorylus* sp. n.

Lepidoptera.

Aurivillius, 60; Afr. Trop. and S., 11

spp. n., *Lasiocampidae* and *Striphnop-*

terygidae.—Aurivillius, 62; *Satyridae*.

Bethune-Baker, 168; Trop. Africa

129 spp. n., *Bombyces*, *Noctuidae*,

Geometridae, genn. n.—Bethune-Baker,

169; *Castalius* sp. n., *Caprona* sp. n.,

Noctuidae 89 spp. n. and genn. n.,

Thyrididae 4 spp. n.

Closs, 430; *Polyptychus* sp. n.

Druce, 619; W. Africa, 2 spp. n.,

Agathia und *Agatha*.—Druce, 620;

3 spp. n., *Virbia* und *Acontia*.—Druce,

621; W. Africa: *Lophoptera* sp. n.

Eltringham, 670; *Acraea* 4 spp. n.

Fletcher, 748; S. Africa *Oxyptilus*

2 spp. n.

Grünberg, 975; Westafrikanische

n. spp., *Gnophodes*, *Acraea*, *Neptis*,

Pseudargynnis, *Euryphene*, *Diestogyna*,

Pentila, *Pseuderesia*, *Liptena*, *Megalo-*

palpus, *Cupido*, *Mylothris*.—Grünberg,

978; *Metarbelidae* Kamerun spp. n.—

Grünberg, 980; Deutsch-Südwest-

Afrika *Maenas* sp. n., *Paramaenas* g. n.

Oberthur, 1753; Hétérocères nou-

voaux.

Hampson, 1000; 39 spp. n.

Joannis, 1165; *Leucophanera* sp. n.

Jordan, 1186; Congo *Polyptychus*

sp. n.

Le Cerf, 1368; *Saturniden* 2 spp. n.,

gen. n.

Meyrick, 1591; many spp. n., 5

genn. n.—Meyrick, 1592; many spp.

n., 4 genn. n., *Microlepidoptera*.

Prout, 1949; *Corium* sp. n.—Prout,

1951; Congo *Antharmostes* sp. n.—

Prout, 1952; *Geometridae* 5 spp. n.

Rebel, 1981; Tanganika-See *Rhopalocera*.

Riel, 2035; Saturnides et Pinarides nouveaux ou peu connus du Sénégal.—
Riel, 2036; *Taragama* 2 spp. n.

Rothschild, 2095; E. Africa *Aegeria* sp. n.

Schouteden, 2203; Congo *Rhopalocera* list.—Schouteden, 2204; Uellé *Rhopalocera* list.

Strand, 2393; Danaidae Satyridae und Lycaenidae, Usambara spp. n.—
Strand, 2399; Deutsch-Ostafrika, n. spp., *Acraea*, *Asterope*, *Aterica*, *Charaxes*, *Hypolycaena*, *Pieris*, *Papilio*, *Jana*, *Gonimbrasia*, *Bunaea*, *Gynanisa*, *Ludia*, *Xanthospilopteryx*, *Chalia*, *Talaeporia*, *Hesperia*.—Strand, 2404; *Cupido* and *Bombyces*, spp. n.—Strand, 2406; Neue Gattungen und Arten Heterocera.—Strand, 2408; Deutsch-Ostafrika *Polyptychus* sp. n.—Strand, 2409; *Ludia* spp. n.—Strand, 2417; *Ozarba* sp. n. Daressalam.—Strand, 2425; Abyssinien *Rhopalocera* spp. n.—Strand, 2426; g. n. *Hesperiidarum*.—Strand, 2428; Kamerun, *Pachypasa* sp. n.—Strand, 2431; *Euryphene* sp. n.—Strand, 2436; *Terina* 3 spp. n.—Strand, 2437; 2 spp. n. *Phasicnecus* und *Thaumatopoea*.—Strand, 2438; *Monda* sp. n.—Strand, 2442; *Polygrammodes* sp. n.—Strand, 2443; Deutsch-Ost-Afrika *Tagoropsis* sp. n.—Strand, 2445; *Phiala* sp. n.—Strand, 2446; *Diatraea* sp. n.—Strand, 2449; n. spp., *Cupido*, *Monda*, *Parnia*, *Odontopacha*, *Leptaroa*, *Euproctis*, *Geodena*, *Athetis*.—Strand, 2451; *Graphidura* spp. n.

Warren, 2692; *Geometridae* and *Pyrilidae*, 3 genn. n., spp. n.

Wichgraf, 2742; *Xanthospilopteryx* sp. n.

Trichoptera.

Ulmer, 2592; *Dipseudopsis* sp. n.

Neuroptera.

Banks, 87; *Myrmeleonidae* spp. n.

Klapálek, 1271; Zwei *Myrmeleoniden*, Abyssinien.

Navás, 1684; *Nemopistha* sp. n.—
Navás, 1686; *Chrysopides* 3 spp. n.—
Navás, 1688; *Ascalaphidae* spp. n.—
Navás, 1695; spp. n. *Nemopteridae*

Osmylidae, *Myrmeleonidae*.—Navás, 1698; C. G. H., *Osmylus* sp. n.

Peringuey, 1827; *Palpares* and *Nemoptera* 4 spp. n.

Diptera.

Austen, 66; Congo *Pangoniinae* spp. n.—Austen, 67; *Tabanus* sp. n.—
Austen, 68; *Glossina* sp. n.—Austen, 69; *Chrysops* 3 spp. n.—Austen, 70; *Hippoboscidae* 2 spp. n.—Austen, 71; *Tabanus* 2 spp. n.—Austen, 73; *Glossina* 2 spp. n.

Carter, 370; Uganda *Culiciomyia* sp. n.

Edwards, 658; Ashanti *Eretmapodites* sp. n.—Edwards, 659; *Anopheles* 2 spp. n.—Edwards, 660; *Culicinae*, revision.—Edwards, 661; W. Africa *Ceratocheilus* sp. n.

Enderlein, 680; *Oscinosomini* gen. n.—Enderlein, 687; *Trypetiden* 8 spp. n., genn. n.

Froggatt, 799; Khartoum *Dacus* sp. n.

Hendel, 1043; Ost-Afrika, *Sepedon* spp. n.

Neave, 1700; Rhodesia haematopotic *Diptera*.

Newstead & Carter, 1722; *Culicidae* 4 spp. n.

Roubaud, 2100; Dahomey *Stomoxys* spp. n.—Roubaud, 2101; *Stomoxys* sp. n.

Pittaluga, 1900; *Oecacta* n. sp.

Scheben, 2170; *Dermatoestrus* n. sp.

Speiser, 2362; 11 spp. n., gen. n.

Surcouf, 2476; Afrique orientale anglaise *Pangonia*.—Surcouf, 2479; *Tabanus* sp. n.—Surcouf, 2480; *Tabanidae* 2 spp. n.—Surcouf et Arias, 2481; Piqueurs Dahomey.—Surcouf et Arias-Encobet, 2482; Piqueurs Niger Tchad.

Theobald, 2510; Uganda *Corethra* sp. n.—Theobald, 2515; Sudan *Culicidae* 2 spp. n.—Theobald, 2517; Uganda *Culicidae* spp. n.—Theobald, 2518; *Pyrethrophorus* and *Culex* 6 spp. n.

Wellman, 2718; Mosquitoes of Bihé and Bailundo.

Aphaniptera.

Rothschild, 2085; gen. n.

Hemiptera.Bergroth, 142; *Capyella* sp. n.Distant, 589; 11 spp. n. *Euaehanes*, *Oannes*, *Lygaeus*, *Sanazarius*, *Neovarvus*, *Holotrichius*, *Pirates*.Horváth, 1107; *Phyllontocheila* spp. n.—Horváth, 1108; Uganda *Valleriola* sp. n.—Horváth, 1109; Abyssinia *Cicadidae* gen. n.Howatt, 1122; *Anthocoride* nouveau du Dahomey.Lindinger, 1427; *Coccidae* spp. n.

Melichar, 1557; Homoptera numerous spp. n.

Montandon, 1627; 2 spp. n., *Lacostrepes* and *Ranatra*.Neiva, 1705; *Triatoma* spp. n.Newstead, 1715; *Coccidae* and *Aleurodidae*, spp. n.—Newstead, 1718; *Coccidae* spp. n.—Newstead, 1719; gen. n. *Psyllidae*.Poppius, 1913; *Helopeltis* 3 spp. n.—Poppius, 1914; *Pameridea* sp. n. Kapland.—Poppius, 1920; *Eurystylus* spp. n.Reuter & Poppius, 2028; *Bryocorina* 6 spp. n., gen. n.Schmidt, 2188; Homopteren, 10 spp. n., gen. n.—Schmidt, 2189; *Paropioxys* 2 spp. n.—Schmidt, 2190; Membraciden, spp. n.Schouteden, 2206; *Cimicidae* and *Coreidae* spp. n.—Schouteden, 2207; *Reduviidae* spp. n.Schumacher, 2240; *Ploiariola* sp. n.Strand, 2411; *Anecphora* sp. n. Kamerun.—Strand, 2418; neue *Anecphora* Kamerun.—Strand, 2421; *Malfeytia* sp. n.*Thysanoptera*.

Trybom, 2557; Britt. Ostafrika 2 spp. n.—Trybom, 2558; Ägypten und Sudan, spp. n.

Psocoptera.Enderlein, 682; *Archipsocus* n. sp.

Ribaga, 2030; Copeognati sud-africani nuovi.

Mallophaga.

Mjöberg, 1614; Ägypten und Sudan.

Isoptera.Sjöstedt, 2322; Brit. East Africa *Eutermes* sp. n.—Sjöstedt, 2323; Termiten 12 spp. n.—Sjöstedt, 2324; Kongo Termiten 8 spp. n.—Sjöstedt, 2325 & 2326; spp. n.

Wasmann, 2699; spp. n.

Embioptera.

Krauss, 1303; spp. n.

Ephemeroptera.

Navás, 1683; 2 spp. n.

Odonata or *Paraneuroptera*.

Grünberg, 977; Victoria-Nyanza, 2 spp. n.

Ris, 2044; *Anax* sp. n.—Ris, 2045; *Orthetrum* 2 spp. n.—Ris, 2047; *Bradinopyga* sp. n.*Orthoptera*.Bolivar, 205; Congo *Acrididae* 12 spp. n., gen. n.Burr, 313; Trop. Africa incl. Abyssinia, *Forficulidae* 10 spp. n.—Burr, 315; 8 spp. n. *Forficulidae*.Giglio-Tos, 858; *Mantidae* spp. n.—Giglio-Tos, 859; *Tarachodes* 15 spp. n.—Giglio-Tos, 860; *Galepsus* 16 spp. n.Griffini, 938; *Gryllacris* sp. n. Kamerun.—Griffini, 941; n. gen. *Gryllacridae*.—Griffini, 943; *Grillacridi* 2 spp. n.—Griffini, 949; *Grillacridi*, catalogo.—Griffini, 953; *Neanias* 2 n. spp.Karny, 1207; *Homorocoryphus* sp. n.Kuthy, 1336; Africa or. *Phlaeoba* n. sp.La Baume, 1343; n. spp., *Homoeoxipha*, *Madiga*, *Pardalota*.Rehn, 1991; *Mantidae* and *Phasmidae* spp. n.Schulthess-Rechberg, 2228; Transvaal *Phasmidae* gen. n.Shelford, 2281; *Blattidae* 5 spp. n.—†Shelford, 2284; Amber *Blattidae* spp. n.—Shelford, 2285; *Blattidae* spp. n.Zacher, 2783; *Forficulidae* spp. n.

Madagascar and Mascarene Islands.

Coleoptera.

- Arrow, 42; *Lonchotus* 5 spp. n.—
Arrow, 46; gen. n. near *Phileurus*.
Beguin-Billecocq, 132; *Apion* spp. n.
Felsche, 726; *Epilissus* spp. n.
Jordan, 1184; *Anthribidae* gen. n.
Kerremans, 1226; Mad. (incl. Comoro islds.) *Polybothris* 19 spp. n.
Moser, 1653; *Serica*, Madagascar.—
Moser, 1654; *Cetoniden* spp. n.
Pic, 1871; *Colobaspis* sp. n.
Schubert, 2226; *Staphylinidae* spp. n.
Spaeth, 2359; *Cassididae* spp. n.
Strohmeyer, 2464; *Platypus* spp. n.
Théry, 2520; *Buprestidae* spp. n.
Weise, 2712; *Coelaenomenodera* sp. n.

Hymenoptera.

- Kieffer, 1238; Seychelles *Cynipidae* 8 spp. n.
Santschi, 2144; *Sima* sp. n.—
Santschi, 2150; *Formicidae* spp. n.
Turner, 2584; Seychelles etc. *Fossoria* spp. n.

Lepidoptera.

- Dognin, 607; *Axiodes* sp. n.
Fletcher, 749; Seychelles *Heterocera* 13 spp. n., distribution discussed.—
Fletcher, 750; Seychelles etc., *Orneodidae* and *Pterophoridae* 4 spp. n.
Le Cerf, 1371; *Aegeriidae* gen. n.
Meyrick, 1590; Aldabra and Seychelles *Tortricina* and *Tineina* 99 spp. n., distribution discussed.
Rothschild, 2093; *Rhodogastrina* sp. n.—
Rothschild, 2096; *Micronaclia* 3 spp. n.
Strand, 2449; *Parnia* sp. n.

Trichoptera.

- Ulmer, 2592; *Dipseudopsis* sp. n.

Neuroptera.

- Navás, 1686; Seychelles and Mauriti *Chrysopa* spp. n.

Diptera.

- Enderlein, 686; *Chloropidae* 2 spp. n.—
Enderlein, 687; *Trypetidae* spp. n.
Kieffer, 1239; Seychelles *Cecidomyiidae* many spp. n.—Kieffer, 1240; Seychelles *Chironomidae* many spp. n.

Hemiptera.

- Bergroth, 146; *Pentatomidae* 2 genn. n.
Distant, 581; *Pentatomidae* gen. n.
Horváth, 1107; *Glypsus* sp. n.
Schmidt, 2188; *Cornelia* sp. n.

Orthoptera.

- Giglio-Tos, 858; Comoro, gen. n. *Mantidae*.
Griffini, 947; *Gryllacris* 2 spp. n.—
Griffini, 948; *Gryllacridae* spp. n.

Asia, Tropical & Eastern,

Including Japan, Biluchistan, Afghanistan.

For West and Centr. Asia *vide* Palaearctic (*h*); for North Asia *vide* Palaearctic (*c*).

Insecta, collectively.

- Banks, 91; India *Neuroptera* and *Trichoptera* spp. n.
Matsumura, 1536; Formosa, sugar-cane ins., spp. n.
Navás, 1693; China, Formosa, Japan, *Neuroptera* s.l. spp. n., genn. n.

Coleoptera.

- Arrow, 47; India etc., *Micranomala* gen. n.—Arrow, 48; Ceylon *Rutelinae* 11 spp. n.—Arrow, 49; India *Anomala* 14 spp. n.
Bernhauer, 157; India *Staphylinidae* spp. n.
Boileau, 200; Burma etc., *Lucanidae* 6 spp. n.—Boileau, 202; India *Metopodontus* sp. n.
Bolkey, 208; Formosa gen. n. *Brenthidae*.

Boppe, 215; Yunnan *Prionidae* gen. n.—**Boppe, 216;** *Rosalia* de Formosa.

Csiki, 529; India *Aulocochilus* sp. n., Formosa *Rosalia* sp. n.

Formánek, 768; *Byctiscus* sp. n. Ost-China.

Gillet, 861; Bengal *Copris* sp. n.—**Gillet, 863;** Tonkin *Synapsis* sp. n., India *Onitis* sp. n.

Grouvelle, 962; Yunnan and Formosa *Heterocerus* spp. n.—**Grouvelle, 964;** India etc. *Trachypolis* spp. n.—**Grouvelle, 972;** India *Clavicornia* 5 spp. n.

Hauser, 1015; China *Coptolabrus* sp. n.

Heikertinger, 1031; *Aphthona* sp. n. Buchará.

Heller, 1034; Formosa *Ceracupes* sp. n.

Horn, 1103; Ceylon, India, Sumatra, ancient connection.—**Horn, 1104;** *Cicindela*, Ceylon.

Jordan, 1184; India, Malay Penins., *Antribidae* 10 spp. n.

Kuntzen, 1327; Assam and Formosa *Lesticus* 2 spp. n.

Lameere, 1351; Annam *Dorysthenes* sp. n.

Lapouge, 1357; ile Quelpart *Coptolabrus* sp. n.

Lesne, 1404; Tonkin *Heterarthron* sp. n.—**Lesne, 1410;** *Dinoderus* 2 spp. n.

Lewis, 1420; India, China, Japan, *Histeridae* 4 spp. n.

Moser, 1651; China and Formosa *Cetoniidae* 3 spp. n.—**Moser, 1652;** Yunnan *Callynomes* sp. n.—**Moser, 1654;** India *Clinteria* sp. n.

Netolitzky, 1709; *Bembidion* sp. n. Ost-Buchará.

Ohaus, 1760; Yunnan *Fruhstorferia* sp. n.

Pic, 1847; *Cantharidae*, *Lampyridae*, *Mordellidae*, spp. n.—**Pic, 1860;** *Malacoderm* and *Heteromera*.—**Pic, 1867;** *Hylophilus* de Malacca.—**Pic, 1872;** India and Ceylon *Idgia* 2 spp. n.

Prell, 1942; Cochin China *Clyster* sp. n.

Ritsema, 2050; Formosa *Helota* sp. n.

Sampson, 2132; Perak and Ceylon *Scolytidae* 2 spp. n., gen. n.

Schilder, 2177; Cicindelinenfauna des chinesischen und des japanischen Reiches.

Schmidt, 2183; Andaman islds. *Dialytes* sp. n.

Schönfeldt D. ent. Nationalbibl. Berlin 2 pp. 189-190; Sauter's Formosa-Ausbeute.

Schubert, 2226; India, China, *Staphylinidae* spp. n.

Sicard, 2295; *Coccinellides* de l'Inde.

Silvestri, 2298; Singapore *Staphylinidae* gen. n.

Stebbing, 2369; India 3 spp. n., *Anthaxia*, *Cryptorhynchus* and *Platypus*.

Théry, 2520; *Buprestidae* spp. n.—**Théry, 2522;** Chota Nagpore *Agelia* sp. n.

Vuillet, 2661; *Autocrates* sp. n.—**Vuillet, 2667;** Japon *Rosalia* sp. n.

Wasmann, 2700; Ceylon *Paussus* sp. n.

Weise, 2713; Siam *Paradibolia* sp. n.

Strepsiptera.

Pierce, 1894; spp. n.

Hymenoptera.

Cameron, 348; Ceylon gen. n. *Hemitelini*.—**Cameron, 352;** Japan 4 spp. n., *Rhynchium* and *Ancistrocerus*.—**Cameron, 358;** *Xanthopimpla* Bengal.

Cockerell, 435; Formosa, India, Ceylon, *Apidae* 10 spp. n.—**Cockerell, 436;** Formosa *Apidae* 9 spp. n.—**Cockerell, 437;** Formosa *Megachile* spp. n., India *Anthophora* sp. n.—**Cockerell, 438;** India and Ceylon *Apidae* 16 spp. n.—**Cockerell, 439;** China *Megachile* sp. n.—**Cockerell, 440;** Formosa *Halictus* 7 spp. n., India *Melissina* sp. n.—**Cockerell, 441;** China *Crocisa* 2 spp. n.—**Cockerell, 450;** Formosa *Bombus* sp. n.—**Cockerell, 452;** Himalayan Tibet *Nomada* sp. n.—**Cockerell, 453;** India and China *Anthophora* 2 spp. n.—**Cockerell, 454;** Formosa *Apidae* 2 spp. n.—**Cockerell, 456;** China *Andrena* sp. n., Singapore

Ceratina sp. n.—Cockerell, 456a; India and China *Apidae* spp. n.—Cockerell, 459; Japan and China *Apidae* spp. n.—Cockerell, 459a; Japan, Tibet, China, Siam, *Apidae* spp. n.

Crawford, 513; Japan *Chrysididae* 2 spp. n.

Emery, 674; India *Pseudolasius* sp. n.

Enslin, 689; Formosa *Tenthredinidae* spp. n.—Enslin, 697; *Tenthrediniden* Formosa spp. n., genn. n.

Forel, 758; Fourmis nouvelles ou intéressantes.—Forel, 762; Ceylon *Vollenhovia* sp. n.—Forel, 763; Japan *Camponotus* sp. n.—Forel, 764; Singapore, Ceylon, *Formicidae* spp. n.—Forel, 765; Ceylon *Formicidae* gen. n., spp. n.—Forel, 767; Burma *Pseudolasius* sp. n.

Friese, 789; China and Formosa *Apidae* spp. n.

Girault, 887; China and Japan *Trichogrammatidae* spp. n.

Howard, 1118; India *Prospaltella* sp. n.

Kieffer, 1234; India and Ceylon *Proctotrypidae* 2 spp. n.—Kieffer, 1244; Dryinide, Indes orientales.

Meade-Waldo, 1543; Formosa *Vespa* sp. n.

Mocsáry, 1617; *Chrysididae* spp. n.

Rohwer, 2067; Formosa spp. n.—Rohwer, 2070; India *Tachytes* sp. n.

Santschi, 2147; Deux nouvelles fourmis du Tonkin.

Strand, 2396; Ceylon and China *Podagrion* spp. n.—Strand, 2414; Formosa gen. n. *Chalcididae*.—Strand, 2419; *Chalcididen* gen. n.—Strand, 2430; *Anacryptus* and *Antrocephalus* spp. n.

Turner, 2581; Karachi and Quetta *Palarus* 2 spp. n.

Ulbricht, 2589; Japan *Pimpla* sp. n.

Viereck, 2634; Japan 2 spp. n., *Phygadeuon* and *Diaeretus*.—Viereck, 2635; Japan *Pimpla* sp. n.

Yano, 2778; *Polyrhachis* of Japan.—Yano, 2779; Japan *Formicidae* sp. n.

Lepidoptera.

Austaut, 65; *Psilogramma* sp. n. Japan.

Bastelberger, 112; Formosa *Milionia* spp. n.—Bastelberger, 113; Geometriden Formosa.—Bastelberger, 114; *Geometridae* Formosa.—Bastelberger, 115; Andaman islds. *Dysphania* sp. n.—Bastelberger, 119; Geometriden Formosa spp. n.

Bell, 133; The common butterflies of the plains of India.

de Rhé-Philipe, 568; Yunnan butterflies.

Druce, 618; India *Parhestina* sp. n.—Druce, 620; Assam *Tyana* sp. n.

Grünberg, 973; China *Gastropacha* sp. n.

Hampson, 1000; incl. Tibet, 12 spp. n.—Hampson, 1001, 1002; British India *Hadeninae*.

Jordan, 1185; Tonkin *Loepa* sp. n.—Jordan (in Seitz), 2255; *Saturniidae* spp. n.

Martin, 1521; Rundfahrt.

Meyrick, 1586; India *Gelechiidae* and *Xyloryctidae* spp. n.—Meyrick, 1589; India 3 spp. n., *Lithocolletis* and *Acrocercops*.

Miyake, 1612; Lithosianae of Japan.

Prout, 1949; Tientsin *Acidalia* sp. n.—Prout, 1951; India *Gelasma* sp. n.

Peile J. Bombay Soc. 20 p. 833; List of butterflies, Ganges valley.

Rothschild, 2095; Assam *Sphecia* sp. n., Malay Penins., *Paranthrena* sp. n.—Rothschild, 2096; Formosa, Yunnan and Annam, *Amata* 4 spp. n.

Strand, 2433; *Lymantriidae* 3 spp. n.

Swinhoe, 2492; India *Lycaenidae* 9 spp. n.

Tytler, 2585; Naga hills *Rhopalocera* annotated list, *Apatura* sp. n.

Warren, 2693; *Noctuidae* spp. n.—Warren, 2694; India and Burma *Noctuidae* 15 spp. n.

Wileman, 2753; Formosa *Rhopalocera* spp. n.—Wileman, 2754; Formosa 47 spp. n.—Wileman, 2756; Formosa *Geometridae* 27 spp. n.—Wileman, 2757; Japan *Heterocera* many spp. n.

Yano; *Euchloe*, *Aporia*, *Oeneis*, in Japan (Japanese); Dobuts. Z. Tokyo 23 pp. 53–56.

Trichoptera.

Ulmer, 2591; Formosa spp. n.

Neuroptera.

Gravely, 928; Myrmeleonid and Ascalaphid larvae.

Miyake, 1613; Japan *Panorpa* sp. n.

Navás, 1698; Tonkin and Malabar 2 spp. n., *Micromus* and *Chrysopa*.—Navás, 1699; India Némoptéríde nouveau.

Okamoto, 1766; Zur Mantispiden Japans.

Diptera.

Becker, 123; *Chloropidae* many spp. n.

Brues, 286; Formosa *Phoridae* n. spp.

Brunetti, 292; Indian region, *Nemocera* many spp. n.—Brunetti, 294; Oriental *Tipulidae* spp. n.—Brunetti & James, 295; Yunnan *Bibionidae*, *Mycetophilidae* and *Anophelinae*.

Christophers, 425; India *Culicidae* gen. n.—Christophers, 427; *Neocellia* n. sp.

Edwards, 657; Ceylon *Limnobiinae* 10 spp. n.

Enderlein, 687; Formosa *Trypetidae* spp. n.

Felt, 733; *Endaphis* sp. n. Ceylon.

Hendel, 1043; Formosa *Sepedon* sp. n.

Kieffer, 1251; Yunnan *Chironomides*.—Kieffer, 1252; India, etc., *Chironomidae* spp. n.—Kieffer, 1253; *Chironomides* Himalaya et Assam.

Pérez, 1823; *Vespa* spp. n.

Perry, Paludism 1911 p. 62; *M. listoni* Punjab.

Ricardo, 2032; *Tabanidae* spp. n.

Speiser, 2362; Formosa 2 spp. n., *Zelmira* and *Milesia*.

Summers, 2471; Malay States *Stomoxys* sp. n.—Summers, 2472; Siam *Simulium* sp. n.

Aphaniptera.

Jordan & Rothschild, 1189; China 13 spp. n., gen. n.

Rothschild, 2088; India and Burma 2 spp. n., gen. n.—Rothschild, 2089; India and China.

Hemiptera.

Distant, 581; China and Korea *Pentatomidae* genn. n., spp. n.—Distant, 583; China *Rihana* sp. n.—Distant, 586; India and Ceylon *Fulgoridae* 24 spp. n., genn. n.—Distant, 590; India 16 spp. n., genn. n.

Green, 933; Ceylon spp. n.

Horváth, 1107; Formosa 2 spp. n., *Sirthenaea* and *Saldoida*.

Horváth, 1107; Formosa *Canthecoidae* sp. n., China *Pinthaeus* sp. n.

Kuwana, 1339; Japan *Aleyrodidae* spp. n.

Lindinger, 1429; *Coccidae* spp. n., India.

Marlatt, 1514; Japan *Aspidiotus* sp. n.

Montandon, 1626; Tonkin *Gestroiella* sp. n.—Montandon, 1627; Ceylon *Cercotmetus* sp. n.

Poppius, 1918; Miriden von Ceylon.—Poppius, 1920; *Eurystylus* India spp. n.

Sasaki, 2153; Japan *Astegopteryx* sp. n.

Schmidt, 2188; 2 spp. n., Bangkok *Dichoptera*, Sikkim *Kolla*.—Schmidt, 2189; Burma *Fulgoridae* spp. n.

Thysanoptera.

Okamoto, 1765; *Euthrips* sp. n. Japan.

Isoptera.

Holmgren, 1094; Tonkin gen. n.

Paraneuroptera.

Bartenev, 108; Ordos *Ischnura* n. sp., Hakodate *Agrion* sp. n.

Orthoptera.

Borelli, 224; India *Forficulidae* 2 spp. n., *Homoeolabis* and *Euborellia*.

Burr, 313; Annam *Platylabia* sp. n.—Burr, 322; Siam *Diplatys* sp. n.—Burr, 325; Ceylon *Platylabia* sp. n.

Griffini, 942; Tonkin *Gryllacris* sp. n.—Griffini, 947; Tonkin *Anabropsis* sp. n.

Kirby, 1260; Malay penins. *Temnophyllus* sp. n.

Shelford, 2281; India *Stylopyga* sp. n.

Shiraki, 2290; Japan and Formosa *Phasmidæ* and *Mantidæ* spp. n.

Aptera.

Ritter, 2052; Ceylon und Bombay, many spp. n.

Silvestri, 2302; *Machilidæ* spp. n.—Silvestri, 2303; Ceylon *Lepidospora* sp. n.—Silvestri, 2312; Ceylon *Assmuthia* sp. n.

Asiatic Archipelago.

Java to New Guinea, incl. Philippines.

Insecta, collectively.

Silvestri, 2299; Java *Atelura* sp. n., *Staphylinidæ* gen. n.

Coleoptera.

Achard, 3; Sumatra *Chelidonium* sp. n.

Arrow, 46; Borneo and New Guinea *Dynastinae* 4 spp. n., gen. n.

Aulmann, 54; N. Guinea and N. Pommern, *Pimelopus* spp. n.

Aurivillius, 58; *Cerambycidae* Borneo 10 genn. n., 31 spp. n., Neu Guinea 7 spp. n., Java 1 sp. n., Philippinen 1 sp. n., Sumbava 1 sp. n.

Bernhauer, 157; *Staphyliniden* spp. n.

Boileau, 200; Sumatra *Gnaphaloryx* sp. n.

Bolkay, 208; Neu-Guinea gen. n. *Brenthidæ*.

Borchmann, 218; Sumatra *Nemostira* spp. n.

Csiki, 529; *Aulacocœilus* 2 spp. n.

Dupuis, 631; Sumbawa *Apotomus* sp. n.

Gestro, 848; *Hispidae* di Borneo.

Grouvelle, 963; *Anthrophagus* n. sp. Java.—Grouvelle, 964; *Trachypolis* et *Microvonus* spp. n.

Heller, 1037; Java *Alcides* sp. n.—Heller, 1036; *Morokia* sp. n. Neuguinea.

Heyden, 1065; Aru- und Kei-Inseln, spp. n., *Discodon*, *Anthicomorphus*, *Mordellistena*, *Baris*.

Jordan, 1184; *Anthribidæ* 21 spp. n.

Kerremans, 1223; *Cyphogastra* spp. n.

Lesne, 1404; Borneo *Heterarthron* sp. n.

Möllenkamp, 1621; Borneo and N. Guinea, *Aegus* 2 spp. n.

Moser, 1653; *Serica* von Borneo.—Moser, 1654; Borneo *Cetoniidæ* spp. n.—Moser, 1655; Philippines 2 spp. n., *Holotrichia* and *Protaetia*.

Moulton, 1659; Borneo *Buprestidæ* list.

Ohaus, 1760; *Ruteliden* spp. n.

Olivier, 1770; Nouvelle-Guinée *Luciola* 2 spp. n.—Olivier, 1772; N. Guinea *Atypheila* 3 spp. n.—Olivier, 1777; *Lampyridæ* spp. n.

Pic, 1854; *Zonitis* de la Nouvelle-Guinée et régions avoisinantes.—Pic, 1862; *Idgia* de Java et de Sumatra.—Pic, 1864; Sumatra *Tomoderus* sp. n.—Pic, 1869; Lombok *Cantharis* sp. n.

Prell, 1942; Borneo *Clyster* sp. n.

Ritsema, 2048; Sumatra 2 spp. n., *Coelosterna* and *Apriona*.

Roepke, 2057; Java *Apoderus* sp. n.

Schmidt, 2182; Java *Rhyparus* sp. n.

Schubert, 2226; *Staphylinidæ* spp. n.

Strohmeyer, 2465; Philippinen, *Scolytidæ* spp. n.

Théry, 2520; *Buprestidæ* spp. n.—Théry, 2522; Moluccas *Iridotaenia* sp. n.

Weise, 2712; Philippines *Hispinae* 3 spp. n.—Weise, 2713; *Hispidae* 4 spp. n.

Hymenoptera.

Cameron, 350; Borneo *Evaniidæ* 5 spp. n.—Cameron, 351; Borneo *Ichneumonidæ* 3 spp. n.—Cameron, 356; *Chalcididæ*, Borneo, spp. n.,

genn. n.—Cameron, 359; Hymenoptera (except Anthophila and Formicidae) New Guinea many spp. n.

Crawford, 515; Sumatra *Chalcididae* and *Proctotrypidae* spp. n.

Emery, 674; Java and Amboina *Pseudolasius* 3 spp. n.—Emery, 678 & 679; Formicidae Neu-Guinea spp. n.

Enslin, 695; Java *Tenthredinidae* gen. n.

Forel, 763; *Formicidae* spp. n.—Forel, 763 ?; Ameisen, Java.—Forel, 764; Borneo, *Formicidae* spp. n.—Forel, 758; Fourmis nouvelles.

Friese, 783; *Megachile* spp. n.—Friese, 784; Neuguinea spp. n. *Anthophora* and *Megachile*.—Friese, 793; *Apidae* Neu Guinea spp. n.—Friese, du Buysson & Strand, 794; Aru- und Kei-Inseln, *Aculeata* spp. n.

Kieffer, 1242; Java *Parevania* sp. n.

Mocsáry, 1617; *Chrysididae* spp. n.

Stitz, 2383; Neu-Guinea *Formicidae* spp. n.

Strand, 2441; Papuanischer Schlupfwespen.

Turner, 2580; Palau islds. *Scolia* sp. n.

Viereck, 2635; Philippines *Orgilus* sp. n.—Viereck, 2636; Sumatra *Megarrhogas* sp. n.

Lepidoptera.

Bastelberger, 115; Sumatra, *Loebochlora* sp. n.—Bastelberger, 116; Borneo *Arycanda* sp. n.—Bastelberger, 118; *Craspedosis* 2 spp. n.

Bethune-Baker, 170; New Guinea 6 spp. n., *Nacaduba*, *Heterusia*, *Gyrtona*, *Hypera*, *Abraxas*, *Daulia*.

Chapman, 399; Borneo *Lycaenopsis* 2 spp. n.

Druce, 620; Borneo *Carea* 2 spp. n.

Fletcher, 748; Aru *Oxyptilus* sp. n.

Fruhstorfer, 803; Neue Hesperiden Indo-Malayischen.—Fruhstorfer, 804; N. Guinea *Huphina* sp. n.—Fruhstorfer, 806; *Satyridae* spp. n.

Grünberg, 979; *Apsarasa* 3 spp. n.

Hampson, 1000; 15 spp. n.

Kenrick, 1222; New Guinea 5 spp. n., *Ornithoptera*, *Delias* and *Libythea*.

Lück & Gehlen, 1462; N. Guinea *Delias* sp. n.

Moulton, 1661; Borneo *Lycaenidae* spp. n.

Prout, 1949; New Guinea *Sarcinodes* sp. n.—Prout, 1950; New Guinea *Geometrinae* 5 spp. n.—Prout, 1951; New Guinea 3 spp. n. *Thalassodes* and *Anisozygia*.

Rothschild, 2092; New Guinea 2 spp. n., *Deudoryx* and *Panacra*.—Rothschild, 2094; Buru and N. Guinea *Euchromia* 2 spp. n.—Rothschild, 2095; New Guinea 2 spp. n., *Melittia* and *Ichneumonoptera*.—Rothschild, 2096; New Guinea *Amata* 2 spp. n.

Strand, 2401; Deutsch-Neuguinea n. spp. etc. von Tellervo, Taenaris, Cupido, Ogyris, Bordeta, Ophthalmis.—Strand, 2420; Minahassa *Milionia* sp. n.

Warren, 2694; New Guinea and Borneo, *Noctuidae* 6 spp. n.

Neuroptera.

Navás, 1691; Sumatra *Hybris* sp. n.

Diptera.

Banks, 92; *Ascodipteron* sp. n.

Becker, 123; *Chloropidae*, Monographie, gen. et spp. n.

Brunetti, 294; *Tipulidae* spp. n.

Enderlein, 687; *Trypetidae* 13 spp. n., genn. n.

Hendel, 1043; *Sepedon* spp. n.

Ludlow, 1461; Philippine *Culicidae* spp. n.

Meyere, 1578; *Tipulidae* spp. n.—Meyere, 1579; Südostasiatische, grösstenteils javanische.

Ricardo, 2031; *Tabanus* spp. n.

Theobald, 2516; *Culicidae* 4 spp. n.

Villeneuve, 2640; *Ceromasia* sp. n. Neu-Guinea.

Hemiptera.

Distant, 581; Philippines *Sastragala* sp. n., New Guinea *Utana* sp. n.

Distant, 583; Sumatra *Cryptotympana* sp. n.—Distant, 585; Aru islds. 2 spp. n., *Mictis* and *Sawda*.

Horváth, 1107; *Platynopus* spp. n.

Lallemand, 1347; New Guinea *Cosmoscarta* 2 spp. n.

Lindinger, 1429; *Coccidae* 3 spp. n.

Montandon, 1625; Nouvelle-Guinée gen. n. *Hydrocoris*.—Montandon, 1626; *Cercotmetus* 2 spp. n.—Montandon, 1627; N. Guinea *Cercotmetus* sp. n.

Moulton, 1660; Sarawak, *Cicadidae* 2 spp. n.

Muir, 1672; *Perkinsiella* spp. n.

Poppius, 1916; *Mecistoscelis* sp. n. Neu-Guinea.—Poppius, 1920; *Eurystylus* spp. n.

Schmidt, 2186; Sumatra and Borneo *Coreidae* 2 genn. n.—Schmidt, 2187; Neue von Borneo.—Schmidt, 2188; 6 spp. n.—Schmidt, 2189; N. Guinea *Myrilla* sp. n.—Schmidt, 2190; *Oturis* spp. n.

Thysanoptera.

Karny, 1206; Revision *Heliothrips* N. Guinea 2 spp. n.

Embiopoda.

Krauss, 1303; Sumatra sp. n.

Isoptera.

Holmgren, 1092; Neu-Guinea spp. n.

Odonata or *Paraneuroptera*.

Laidlaw, 1346; Borneo *Orchithemis* sp. n.

Ris, 2043; Borneo 3 spp. n.—Ris, 2047; *Neurothemis* 2 spp. n.

Orthoptera.

Bolívar, 206; Obi *Mecopodinae* 2 spp. n.

Burr, 320; Dermapteren, Aru- und Kei-Inseln.—Burr, 321; *Dermaptera* Java.—Burr, 322; *Diplatys* 3 spp. n.—Burr, 325; *Forficulidae* 4 spp. n.

Griffini, 937; Nova Guinea *Stenopelmatidi* spp. n.—Griffini, 946; Nuova Guinea *Gryllacris* sp. n., gen. n.—Griffini, 950; Borneo *Gryllacris* sp. n.—Griffini, 952; *Gryllacris* Nuova Guinea.

Karny, 1207; *Agraecia*, *Habetia*, *Rhydaspis*, *Salomona* und *Xiphidion* spp. n. Neu Guinea.

Kuthy, 1336; Nova Guinea 2 spp. n., *Eupromachus* und *Biroella*.

(n-9186 j)

Shelford, 2281; Java und Manila 2 spp. n., *Stylopyga* und *Blatta*.—Shelford, 2283; Aru und Kei Islands, *Eroblatta* sp. n.

Werner, 2720; Aru- und Kei-Inseln, *Hierodula* spp. n.

Zacher, 2783; *Forficulidae* spp. n.

Aptera.

Silvestri, 2302; *Machilidae* spp. n.

Australia und Tasmania.

Coleoptera.

Aurivillius, 58; N. Südwaies Cerambycidae sp. n.

Blackburn, 190; *Heteronyx* spp. n.—Blackburn, 190; *Melolonthidae* und *Elateridae*, spp. n.

Carter, 371; *Nyctozoilides* revision, spp. n., gen. n.—Carter, 372; *Tenebrionidae* spp. n.—Carter, 373; *Tenebrionidae* 3 spp. n.

Dupuis, 632; *Catadromus* sp. n.

Gillet, 861; Melville Isld. *Coptodactyla* sp. n.

Grouvelle, 966; *Colydiidae* sp. n. *Cucujidae* 7 spp. n. *Erotylidae* sp. n.

Goudie, 906; North-west Victoria *Staphylinidae*.

Lea, 1359; *Curculionidae* spp. n.—Lea, 1360; *Curculionidae* spp. n.—Lea, 1361; *Curculionidae* many spp.—Lea, 1362; Australia und Tasmania *Staphylinidae* spp. n., *Cucujidae*, *Lucanidae*, *Cleridae*, *Scolytidae*, spp. n.—Lea, 1365; Australia und Tasmania *Pselaphidae* spp. n.—Lea, 1366; Tasmania *Lissotes* spp. n.—Lea, 1363a; symbiotic *Col.* many spp. n.

Prell, 1943; Dynastinen *Liteupatorus* gen. n.

Sloane, 2336; *Carabidae* Dorrigo.

Théry, 2520; *Buprestidae* spp. n.

Hymenoptera.

Cameron, 354; *Hym. parasit. spp. n.*
 Cockerell, 439; *Euryglossa* 2 spp. n.
 —Cockerell, 451; *Heterapis* gen. n.—
 Cockerell, 456; *Apidae* spp. n.

Crawford, 515; *Proctotrypidae* and
Chalcididae, spp. n.

Forel, 757; *Meranoplus* sp. n.—
 Forel, 762; *Turneria* sp. n.

Friese, 784; 2 spp. n. *Anthophora*
 and *Megachile*.

Girault, 868; *Anagrus* sp. n.—
 Girault, 881; *Ufens* sp. n.—Girault,
 891; *Stethynium* sp. n.

Kieffer, 1234; *Proctotrypidae* 4
 spp. n.—Kieffer, 1242; *Evania* sp. n.
 —Kieffer, 1255; *Serphidae* und *Evan-*
iidae.

Meade-Waldo, 1545; *Masaridae* 3
 spp. n., gen. n.

Mocsáry, 1617; *Chrysis* sp. n.

Rohwer, 2070; *Zoyphium* sp. n.

Stitz, 2383; *Formicidae* spp. n.

Strand, 2396; *Podagrion* sp. n.—
 Strand, 2441; *Gasteruption* spp. n.

Turner, 2582; *Thynnidae* 7 spp. n.

Lepidoptera.

Hampson, 1000; *Ariathisa* sp. n.

Lower, 1440; *Hesperiidae* revision.

Meyrick, 1593; Revision of *Tor-*
tricina.

Prout, 1949; W. Australia *Hypo-*
grapha sp. n.

Turner, 2572; many spp. n.

Warren, 2694; Queensland *Data*
 sp. n.

Neuroptera.

Navás, 1688; *Stilbopteryx* sp. n.

Diptera.

Becker, 123; *Chloropidae*, Mono-
 graphie, gen. et spp. n.

Froggatt, 799; *Trypetidae* spp. n.

Lea, 1364; N.S.W. *Phoridae* gen. n.

Strickland, 2457; Australia and
 Tasmania *Culicidae* spp. n.

Hemiptera.

Distant, 581; *Pentatomidae* genn. n.,
 spp. n.—Distant, 582; *Coreidae* and
Berytidae 11 spp. n., genn. n.—Distant,
 583; *Urabunana* sp. n.

Froggatt, 797; Salt-bush pest *Ale-*
urodes. — Froggatt, 800; *Tachardia*
 sp. n.

Poppius, 1919; *Miriden* spp. n.—
 Poppius, 1920; *Eurystylus* sp. n.

Thysanoptera.

Karny, 1204; *Thrips*-Gallen und
 Gallen-Thripse.

Odonata or *Paraneuroptera.*

Tillyard, 2530; *Corduliinae* spp. n.—
 Tillyard, 2531; *Cordulephya* sp. n.

Orthoptera.

Karny, 1207; *Dicranocerus*, *Xiphi-*
dion und *Xiphidiopsis* spp. n.

Giglio-Tos, 858; Cape York *Sphodro-*
poda sp. n.

Shelford, 2281; *Blattidae* 7 spp. n.

Werner, 2720; *Hierodula* sp. n.

Aptera.

Silvestri, 2304; *Heterojapyx* sp. n.

North America.

Insecta, collectively.

Webster, 2706; Diffusion in North
 America.

Banks, 90; *Neuroptera* s.l. many
 spp. n.

Blatchley, 192; Indiana *Orthoptera*
 and *Coleoptera*.

Britton, 265; Guide to the insects
 of Connecticut.—Britton, J. Econ.
 Ent. 4 pp. 544–545; Adirondacks.

†Cockerell, 455; Florissant, Paus-
 sidae, *Hymenoptera* and *Diptera*, spp. n.

Cockerell, Canad. Ent. 43 p. 208 ;
 Colorado short list.

Coolidge, Ent. News 22 pp. 339-342; Collecting in southern Arizona.

Cook, 481; Galls of Michigan.

Dury, 636; Ohio.

Felt, 727; Report of the State entomologist on injurious and other insects of the state of New York.

†Handlirsch, 1003; New Paleozoic insects Mazon Creek, Illinois.—†Handlirsch, 1005; Tertiary Canada.

Heath, p. 327 Canad. Ent. 43; Manitoba brief note.

Hewitt, 1062; Canada, plan for catalogue.

Shull, 2292; Saginaw bay, Michigan, *Thysanoptera* and *Orthoptera*.

Stebbins, 2370; Galls of Springfield.

Coleoptera.

Andrews, 37; Charity islands, Lake Huron.

Bowditch, 245; *Calligrapha* sp. n.

Casey, 374; *Aleocharinae* and *Mylæninæ* many spp. n.

Champion, Ent. News 22 p. 178; *Listronotus bagoiformis* Utah.

Champlain, Psyche 18 p. 35; *Caraidae*, Connecticut.—Champlain, t.c. pp. 170-173; Connecticut.

Davis, J. New York Ent. Soc. 19 p. 199; *Cicindela purpurea limbatis* New York.

Dury, 637; Cincinnatti new species and additions.—Dury, 638; North Carolina, 3 spp. n.

Fall, 716; *Pleocoma* sp. n.

Grinnell, Ent. News 22 p. 227; *Platypsylla castoris* California.

Heikertinger, 1030; *Halticinenerten*, Europa und Nordamerika gemeinsam.

Hopkins, 1100; Monograph *Pissodes* spp. n.

Joutel, J. New York Ent. Soc. 19 p. 200; *Phymatodes longi* New Jersey.

Knab, Ent. News 22 p. 306; *Chrysomela staphylea*.

Kraus, 1302; *Lyctus* sp. n.

Leng, 1384; *Brachyacantha* spp. n.—Leng, 1386; *Dinurites* sp. n. Georgia.

—Leng, 1387; *Luperodes* sp. n.—Leng, (N-9186 j)

1388; Georgia *Serica* sp. n.—Leng, 1389; *Diplotaxis* Staten Island.

Lewis, 1420; Arizona *Spilodiscus* sp. n.

Lutz, J. New York Ent. Soc. 19 p. 200; *Anthrenus fasciatus* Georgia.

McPherson, Trans. Kansas Acad. Sci. 23-24 p. 108; Kansas additions.

Mann, 1499; *Hetaerius* sp. n.—Mann, 1500; spp. n.

Mitchell & Pierce, 1607; Weevils Victoria county, *Artipus* sp. n.

Morris, 1644; Ontario.

Nunenmacher, 1740; *Coccinellidae* spp. n.

Schaeffer, 2160; spp. n.—Schaeffer, Canad. Ent. 43 p. 254; New York *Sphaeridium bipustulatum*.

Swaine, 2487; *Scolytidae* 4 spp. n.

Titus, 2533; *Hypera*, *Phytonomus* sp. n.

Wellman, 2717; *Hornia* sp. n. Kansas.

Wenzel & Wenzel, 2719; Ontario list.

†Wickham, 2746; Florissant new species.—Wickham, 2747; Iowa list.

Wolcott, 2768; New *Cleridae*.

Strepsiptera.

Pierce, 1894; spp. n.

Hymenoptera.

Banks, 89; *Psammocharidae* spp. n.

Beutenmüller, 173; *Andricus* 2 spp. n.—Beutenmüller, 174; n. sp. *Cynipidae*.—Beutenmüller, 175; *Dryocosmus* sp. n.—Beutenmüller, 176; *Dryophanta* sp. nov.

Brues, 287; *Ophioninae* spp. n.

Cameron, 357; *Macrojoppa* California.

†Cockerell, 435; Colorado gen. n. *Apidae*.—Cockerell, 440; *Tripeolus* sp. n.—Cockerell, 441; 7 spp. n., *Osmia*, *Chelynia* and *Stelis*.—Cockerell, 442; Canada *Apidae* list, *Tetralonia* sp. n.—Cockerell, 443; Texas and Arizona *Apidae* 3 spp. n.—Cockerell, 445; *Apidae* localities.—Cockerell, 446; *Osmia* sp. n.—Cockerell, 447; *Synto-*
d 20-2

maspis sp. n.—Cockerell, 449; *Mimatomus* gen. n. Colorado.—Cockerell, 456a; *Apidae* 3 spp. n.—Cockerell, 459; *Apidae* spp. n.—Cockerell, 459a; *Stelis* sp. n.—Cockerell, 460; *Nomada* spp. n.—Cockerell, *Pysche* Boston 18 1911 pp. 134-143; *Perdita* spp.

Crawford, 511; *Cheiloneurus* sp. n.—Crawford, 512; *Chalcididae* 2 spp. n., gen. n.—Crawford, 513; *Chalcididae* spp. n., gen. n.—Crawford, 514; *Chalcididae* spp. n.—Crawford, 515; 2 spp. n., *Halictus* and *Chalcis*.—Crawford & Bradley, 516; *Proctotrypidae* gen. n.

Crosby, 525; *Derostenus* sp. n.

Fullaway, 331; spp. n. *Cynipidae*.

Franklin, 778; *Bombus* and *Psithyrus* spp. n.

Gahan, 819; *Aphidiinae* spp. n.

Girault, 869; Illinois *Encyrtinae* 3 spp. n.—Girault, 873; *Arthrolytus* sp. n.—Girault, 875; *Anagrus* sp. n.—Girault, 877; *Dicopus* sp. n. Quebec.—Girault, 880; Chicago *Aphelinus* sp. n.—Girault, 881; *Abella* sp. n.—Girault, 883; *Polynema* spp. n.—Girault, 884; *Mymar* sp. n.—Girault, 885; *Chalcidoidea* spp. n.—Girault, 886; *Trichogrammatidae*, genn. et spp. n.—Girault, 887; *Trichogrammatidae* spp. n.—Girault, 888; *Mymaridae* spp. n.—Girault, 892; *Chalcididae* gen. n.—Girault, *Ent. News* 22 p. 411; *Ufens niger*, Texas.

Graenicher, 918; Bees north-western Wisconsin, spp. n.

Hewitt, 1063; *Coelopisthia* sp. n.

Howard, 1119; *Coccophagus* sp. n.

Lovell, 1439; *Sphecodes* and *Prosopis*, spp. n.

Macgillivray, 1489; *Empria* 39 spp. n.

Metz, 1570; *Prosopis* spp. n.

Mocsáry, 1617; *Spintharis* 2 spp. n.

Rohwer, 2065; *Caliroa* sp. n. Louisiana.—Rohwer, 2068; *Tenthredinoidea* n. spp.—Rohwer, 2069; *Hoplocampa*, revision, spp. n.—Rohwer, 2070; *Fossoria* spp. n.—Rohwer, 2071; *Chalastogastra* spp. n.

Santschi, 2146; *Formicides* 2 spp. n.

Viereck, 2633; *Ichneumonidae* spp. n.—Viereck, 2634; *Ichneumonidae*, *Braconidae*, spp. n.—Viereck, 2636; *Ichneumonidae* gen. n.—Viereck, Washington Proc. Ent. Soc. 13 pp. 93-99 & 148; Hymenoptera in Smith's *Insects* of New Jersey, third edition.

Wheeler, 2733; *Camponotus* sp. n.—Wheeler, 2736; Texas, *Atta* sp. n.—Wheeler, 2738; Arizona *Trachymyrmex* spp. n.

Lepidoptera.

Anon., *Canad. Ent.* 43 p. 340; Toronto 3 spp.

Barnes & McDunnough, 100; *Noctuidae* 2 spp. n.—Barnes & McDunnough, 101; Revision of *Cossidae*.—Barnes & McDunnough, 104; 3 spp. n. Additional new species of North American.—Barnes & McDunnough, 105; numerous spp. n., genn. n.—Barnes & McDunnough, 106; British Columbia *Olene* sp. n.—Barnes & McDunnough, *Psyche* 18 p. 34; Additions *Sphingidae*.

Bird, 187; 3 spp. n., *Papaipema* and *Hydroecia*.

Busck, 327; Boston *Gnorimoschema* sp. n.

Chagnon, 387; St. Fabien, Que., short list.

Coolidge & Clemence, 486; *Achalarus* sp. n. Arizona.

Davis, 555; Georgia, notes.—Davis, 559; Staten island list Macrolepidoptera.—Davis, *J. New York Ent. Soc.* 19 p. 198; *Vanessa milberti* New York.

Dod, 604; Alberta, *Noctuidae* geographical and critical notes.

Doll, 608; New Mexico, *Datana* sp. n.

Dyar, 641; *Olene* 2 spp. n.—Dyar, 642; *Myelois* sp. n.—Dyar, 643; *Basilodes* sp. n.—Dyar, 644; *Eus-trotia* spp. n.—Dyar, 645; *Dioryctria* sp. n.—Dyar, 646; *Coloradia* sp. n.—Dyar, Washington Proc. Ent. Soc. 13 p. 15; Texas, *Halisdota annulosa*.—Dyar, T.c. p. 20; *Prodenia latifascia* and *Peosina pandrosa*.

Fernald, *Science* 34 p. 488; *Alabama argillacea* Massachusetts.

Fountaine, 774; Alleghanies *Rhopalocera*.

Fyles, 817; *Gnorimoschema* sp. n.

Gibson, 856; Ottawa *Geometridae* list.

Grossbeck, 957; Manitoba *Selidosema* sp. n.

Hampson, 1000; Canada *Leucania* sp. n.

Heath, 1017; Manitoba annotated list.

Henninger, 1049; Seneca county.

Jones, 1176; *Eurycitarus* sp. n.

Pearsall, 1810; Arizona *Geometridae* 2 spp. n.—Pearsall, 1811; *Geometridae* 3 spp. n.—Pearsall, 1812; *Pero* sp. n. Utah.

Rowley, 2113; Lepidoptera of 1910.

Schaus, 2165; *Papilio* sp. n.

Schroers, Ent. News 22 pp. 322-324; St. Louis 1910.

Skinner, 2330; Canada and Wyoming, *Argynnis* and *Parnassius*, spp. n.—Skinner, 2331; *Hesperidae*, new species or sub-species.—Skinner, Ent. News 22 p. 111; Florida and Texas *Timetes*.

Smith, 2340; *Acronycta* spp. n.—Smith, 2341; *Noctuidae* spp. n.—Smith, 2342; California *Pantheinae*, *Raphia* and *Acronycta*.

Stamm, Ent. News 22 pp. 422-423; Butterflies of Montour county.

Swett, 2491; Quebec *Eupithecia* sp. n.

Neuroptera.

Banks, Washington Proc. Ent. Soc. 13 p. 71; *Paranthaclisis hageni*.

Diptera.

Ainslie, Washington Proc. Ent. Soc. 13 pp. 118-120; *Chrysomya demadata*.

Aldrich, 12; *Diostracus* sp. n.—Aldrich, 13; *Hydrophorus* spp. n.

Alexander, 15; New York *Tipulidae* 2 spp. n.—Alexander, 16; *Limnobia parietina*, New York.—Alexander, 17; *Tipulidae* gen. n.—Alexander, 18; *Tipulidae* spp. n.

Banks, 88; *Asilidae* 4 spp. n.—Banks, 93; *Aphiochaeta* sp. n.

Bishop, 189; *Dasyneura* sp. n. New York.

Caccini, 339; *Culicidae* delle paludi salate della costa N.-E. dell' Atlantico.

Cresson, 517; *Pipunculidae* spp. n.

Doane, 601; *Tipula* spp. n.

Felt, 732; *Endaphis* sp. n.—Felt, 735; *Rhopalomyia* sp. n. Ohio.—Felt, 737; *Cecidomyiidae* spp. n.—Felt, 738; *Itonidae*, spp. n.

Fulton, 816; *Stratiomyidae* Cedar Point.

Graenicher, 917; *Bombyliidae*, *Syrphidae* and *Conopidae*.

Hendel, 1047; *Acalyptr.* spp. n.

Hine, 1070; *Promachus* and *Proctacanthus*, spp. n.—Hine, 1071; *Nothomyia* sp. n.—Hine, 1072; *Erax* spp. n.

Kieffer, 1243; Chironomide genre nouv.

Ludlow, 1460; Alaska *Culex* sp. n.

Thompson, 2526; *Tachinidae* 2 spp. n.

Tucker, 2563; *Dolichopus* sp. n.

Van Duzee, 2602; Ontario annotated list.

Walton, 2689; *Syrphidae* 2 spp. n.—Walton, Ent. News 22 p. 182; Corrections New Jersey list.

Aphaniptera.

McCoy, 1483; *Ctenophthalmus* sp. n.

Hemiptera.

Ball, 85; *Jassidae* 9 spp. n.

Barber, 95; Arizona *Dendrocoris* spp. n.—Barber, 96; spp. n.—Barber, 97; *Coccidae* of Louisiana.—Barber, J. N. York Ent. Soc. 19 p. 111; *Pyrhocoris apterus* New Jersey.—Barber, T.c. p. 198; Two Hemiptera new to New Jersey.

Bueno, 300; *Gerrinae* Atlantic states.

Cockerell, 448; *Pseudococcus* sp. n.

Crawford, 508, 509 & 510; American *Psyllidae*.

Crumb, 528; The Jassoidea of Kansas.

Davidson, 550; California, *Aphidae* 2 spp. n.—Davidson, J. Pomona College Ent. 3 pp. 398-399; *Aphididae* Placer county.

Davis, 553; *Aphididae* of Illinois List.

Davis, J. New York Ent. Soc. 19 pp. 112-113; Long Island, N.Y.

Distant, 583; Texas *Pacarina signifera*.

Ehrhorn, 666; 6 spp. n.

Essig, 707; *Aphididae* spp. n., southern California.

Gillette, 865; n. gen. and n. spp. *Aphididae*.—Gillette, 866; *Aphis* n. sp.

Heidemann, 1022; *Leptostyla* sp. n.

Kirkaldy, 1267; *Gerris* sp. n.

Osborn, 1783; *Scaphoideus* n. sp.—Osborn, 1784; Texas *Tinobregmus* sp. n.

Patch, 1799; *Psyllidae* spp. n.

Wilson, 2763; *Aphidae* genn. n., spp. n.

Thysanoptera.

Moulton, 1658; Synopsis, catalogue, new species.

Mallophaga (or *Lipoptera*).

Kellogg & Paine, 1220; from Californian birds.

Ephemeroptera.

Morgan, 1632; New York spp. n.

Odonata (or *Paraneuroptera*).

Muttkowski, 1676; *Gomphus* sp. n.—Muttkowski, 1677; *Ischnura* sp. n.—Muttkowski, 1678; Wisconsin new records, *Enallagma* sp. n.—Muttkowski, 1679; *Tetragoneuria* spp. n.

O'Brien, 1757; Douglas lake, Michigan.

Pollard, 1908; *Gomphoides ambigua* North Carolina.

Williamson, 2760; *Celithemis* sp. n.

Orthoptera.

Caudell, 378; Texas *Stipator* sp. n.—Caudell, 379; Florida *Mantoida mayi*.—Caudell, 383; *Stipator* sp. n.

Davis, 557 & 558; Additions Staten island.

Rehn & Hebard, 1992; Georgia and Florida *Chortophaga* sp. n.—Rehn & Hebard, 1993; North Carolina.—Rehn & Hebard, Ent. News 22 pp. 5-10; Aweme, Manitoba.

Schimmer, 2178; neue *Myrmecophila*-Art.

†Sellards, 2256; Permian Texas *Blattidae* 2 spp. n.

Sherman & Brimley, Ent. News 22 pp. 387-392; Orthoptera of North Carolina.

Woodward, 2774; Douglas lake, Michigan.

Aptera.

Silvestri, 2301; *Japygidae* 11 spp. n.—Silvestri, 2310; *Machilidae* spp. n.

Central America.

Insecta, collectively.

Silvestri, 2305; Mexico, new myrmecophilous.

Coleoptera.

Arrow, 43; Mexico *Goloja* sp. n.—Arrow, 44; 6 spp. n. *Ochodaeus* and *Dicraeodon*.—Arrow, 46; *Dynastinae* 4 spp. n.

Bowditch, 243; *Diabrotica* 3 spp. n.—Bowditch, 244; Costa Rica *Diabrotica* 3 spp. n.—Bowditch, 245; *Calligrapha* etc., spp. n.

Casey, 375; Mexico *Aleocharinae* 3 spp. n.

Champion, 390; *Curculionidae* 5 spp. n.

Dugés, 627; Mexico, ? spp. n.

Grouvelle, 961; *Cryptophagides* Mexique 2 spp. n.

Lameere, 1351; Guatemala *Dero-brachus* sp. n.

Leng, 1384; *Brachyacantha* spp. n.

Lesne, 1404; Mexico *Heterarthron* spp. n.

Lewis, 1420; Guatemala *Coptotrophis* sp. n.

Schmidt, 2183; *Aphodiini* 2 spp. n.—Schmidt, 2184; Mexico *Ataenius* sp. n.

Sharp, 2272, and Champion, 391; many spp. n., genn. n.

Théry, 2520; *Buprestidae* spp. n.

Tower, 2545; *Leptinotarsa* sp. n. Mexico.

Weise, 2712; *Microhopala* sp. n.

Wolcott, 2768; New *Cleridae*.

Hymenoptera.

Beutenmüller, 175; *Cynipidae* 2 spp. n.—Beutenmüller, 178; *Holcaspis* spp. n. Mexico.

Crawford, 513; *Nomia* spp. n.

Forel, 761; Mexico *Prenolepis* sp. n.

Franklin, 778; Mexico *Bombus* sp. n.

Girault, 868; Panama gen. n. *Chalcididae*.—Girault, 878; *Polynema* sp. n. Mexico.

Kieffers, 1234; *Proctotrypidae* 15 spp. n.—Kieffer, 1235; Mexico *Disholcaspis* sp. n.—Kieffer, 1246; Mexico *Stephanidae* gen. n.

Mocsáry, 1617; *Chrysididae* spp. n.

Rohwer, 2068; Mexico *Tenthredinidae* spp. n.—Rohwer, 2070; *Fossoria* spp. n.—Rohwer, 2071; *Tenthredinidae* spp. n.

Strand, 2414; *Megastigmus* sp. n. Mexico.

Wheeler, 2740; *Formicidae* 3 spp. n.

Lepidoptera.

Barnes & McDunnough, 101; *Lasiocampidae* 2 spp. n. Mexico.

Bastelberger, 118; 2 spp. n., *Racheopsis* and *Rotiaria*.

Dognin, 607; *Heterocera* spp. n.

Druce, 620; Costa Rica *Virbia* sp. n.

Dyar, 639; *Diatraea* spp. n.—Dyar, 640; *Hemileuca* spp. n. Mexico.

Jordan, 1185; Mexico *Rhescyntis* sp. n.

Rothschild, 2094; *Syntomidae* spp. n.

Schaus, 2162; Costa Rica, many spp. n., genn. n.—Schaus 2163; Costa

Rica, nearly 200 spp. n.—Schaus, 2165; *Papilio* sp. n. Mexico.—Schaus, 2166; Costa Rica *Cassandra* sp. n.

Stichel, 2378; *Calephelis* sp. n.

Strand, 2392; Chiriqui *Trichostibas* sp. n.—Strand, 2405; Mexico *Anaxita* sp. n.

Walsingham, 2686; *Tineidae* many spp. n., genn. n.

Trichoptera.

Ulmer, 2590; Costa Rica gen. n.

Neuroptera.

Navás, 1686; incl. Lower California, *Chrysopides* 7 spp. n.

Diptera.

Enderlein, 680; Costa Rica, *Oscinosomini* spp. n.—Enderlein, 687; Costa Rica *Baryplegma* sp. n.

Felt, 737; *Bruggmanniella* sp. n.

Hendel, 1044; *Richardiinae* spp. n.

Hine, 1070; Mexico *Proctacanthus* sp. n.

Kröber, 1314; *Therevidae* spp. n.

Hemiptera.

Crawford, 508; *Psyllidae*, *Triozinae*, spp. n.—Crawford, 509; *Psyllidae* spp. n.

Distant, 580; Guatemala *Banasa* sp. n.—Distant, 591; *Rihana* sp. n.—Distant, 592; *Rihana* sp. n. Mexico.

Horváth, 1107; Nicaragua *Hesperoctenes* sp. n.—Horváth, 1107; Panama *Oplomus* sp. n.

Schmidt, 2188; *Phera* sp. n.

Odonata (or *Paraneuroptera*).

The habits of the plant-dwelling larva, *Odonata*; Calvert, 343-345.

Orthoptera.

Borelli, 225; Costa Rica, 5 spp. n. d. Dermatteri.

Griffini, 942; Mexico *Gryllacris* sp. n.

Antilles.

Incl. Bermudas; excl. Trinidad.

Coleoptera.

Champion, 391; *Curculionidae* spp. n.

Fleutiaux, 752; *Trixagidae*, *Melastomidae* et *Elateridae*.

Prell, 1944; Cuba, *Homophileurus* sp. n.

Schaeffer, 2160; *Phanocerus* sp. n.

Hymenoptera.

Crawford, 514; *Chalcididae* spp. n.

Wheeler, 2727; Ants Grenada.—
Wheeler, 2732; Jamaica.

Lepidoptera.

Buxton, Rep. Rugby School Soc. 1910 p. 25; Jamaica *Rhopalocera* brief list.

Prount, 1949; Porto Rico *Leuciris* sp. n.

Rothschild, 2094; Cuba *Eurola* sp. n.
Dominica *Episcepsis* sp. n.

Diptera.

Cresson, 517; Cuba and Bermuda *Pipunculidae* spp. n.

Felt, 729; St. Vincent *Cecidomyiidae* 2 spp. n.—Felt, 731; *Cecidomy.* 2 spp. n.—Felt, 734; *Cecidomyiidae* 4 spp. n.—Felt, 737; Jamaica *Mycodiplosis* sp. n.—Felt, 738; *Itonidae* spp. n.—Felt, 740; *Lasioptera* sp. n.

Kröber, 1314; St. Thomas *Psilocephala* sp. n.

Hemiptera.

Bergroth, 148; Jamaica *Ploeariinae* sp. n.

Crawford, 509; *Psyllidae* spp. n.

Ragnéz, 1971; Cuba, notes etc.

South America, including Trinidad.*Insecta, collectively.*

Kieffer & Herbst, 1256; Gallen und Gallentiere Chile.

Urich, 2595; Trinidad insects affecting the sugar cane.

Coleoptera.

Arrow, 43 *Golofa* 2 spp. n.—Arrow, 44; Paraguay *Hapalonychus* sp. n.—
Arrow, 46; *Dynastinae* 12 spp. n.

Aurivillius, 58; *Cerambycidae* Brasilien 1 sp. n., Süd-Chile 1 sp. n.

Beguin-Billecocq, 132; *Apion* 2 spp. n.

Bernhauer, 156; *Staphyliniden* n. genn. et spp.

Bickhardt, 186; *Histeridae* spp. n.

Boileau, 200; *Sphenognathus* 2 spp. n.

Bourgeois, 234; *Mélyridae* Equateur.—
Bourgeois, 235; Equateur *Malacodermes* 5 spp. n.

Bourgoin, 239 & 240; *Allorrhina* spp. n.

Bowditch, 243 & 244; *Diabrotica* 42 spp. n.—Bowditch, 245; *Calligrapha* etc., spp. n.

Breyer y Trant, 261; *Epicauta* sp. n.

Bruch, 283; *Phaenognatha* sp. n. and *Dynastidae* gen. n.—Bruch, 284; Argentina Catalogue.

Champion, 390 & 391; *Curculionidae* spp. n.

Denier, 565; *Pseudomeloe* sp. n. Pérou.

Felsche, 726; *Coprophage* *Scarabaeiden* spp. n.

Gebien, 834; *Phrenapates* spp. n.

Germain, 844 & 846; Chile, classification notes; and catalogue.

Gillet, 864; *Copridae* 6 spp. n.

Gounelle, 907; Liste des *Cerambycides* de la région de Jatahy, many spp. n.—Gounelle, 908; *Callichroma* du Brésil méridional.—Gounelle, 909; Argentine *Trachyderini* gen. n.

Grouvelle, 969; Paraguay *Epuraea* sp. n.

Heller, 1038; *Oxycorynus* sp. n.

Horn, 1105; *Ctenostoma* 3 spp. n.

Hubenthal, 1126; *Pheropsophus* n. sp.

Jordan, 1184; Amazons *Hypsotropis* sp. n.

Kolbe, 1286; *Curculionidae* gen. n. Argentinien.

- Leng, 1384; *Brachyacantha* spp. n.
- Lesne, 1401; Pérou *Chondrotheca* n. g.—Lesne, 1408; Argentin *Natalis* sp. n.—Lesne, 1409; *Dexicrates* de la faune chilienne en Argentine.—Lesne, 1413; Chile *Anobiidae* gen. n.
- Lewis, 1420; 2 spp. n., *Omalodes* and *Trypanaeus*.
- Moser, 1651 & 1654; *Allorrhina* sp. n.
- Ohaus, 1761; Neue lamellicornia Argentinien.—Ohaus, 1762; subgen. nov. *Melolonthinarum*.—Ohaus, 1764; *Phileurini* genn. et. spp. n.
- Olivier, 1775; Misiones *Lampyridae* 7 spp. n.—Olivier, 1777; Guiana *Photuris* sp. n.
- Pic, 1858; Téléphorides américains nouveaux.—Pic, 1859; *Zonitis* 2 spp. n.—Pic, 1868; Brazil *Dromanthus* 3 spp. n.—Pic, 1869; Parana *Dromanthus* sp. n.—Pic, 1875; 4 spp. n., *Dromanthus*, *Silis*, *Anthicus* and *Spermophagus*.
- Prell, 1942; *Podischnus* sp. n.—Prell, 1944; Dynastinen spp. n.
- Schmidt, 2183; 2 neue Aphodiinen.—Schmidt, 2184; Argentina *Euparia* sp. n.
- Schubert, 2226; *Staphylinidae* spp. n.
- Sicard, 2294; Equateur *Coccinellidae*.
- Spaeth, 2359; *Cassididae* spp. n., genn. n.
- Strohmeyer, 2464; Peru *Platypus* sp. n.
- Théry, 2520; *Buprestidae* spp. n.
- Wasmann & Holmgren, 2702; *Staphylinidae* 2 spp. n.
- Weise, 2712; *Hispidae* many spp. n.—Weise, 2714; *Coccinellidae* 4 spp. n.
- Hymenoptera*.
- Bradley, 247; Brazil *Ornepetes* sp. n.
- Bréthes, 260; *Pompilus* and *Salix* 6 spp. n.
- Cameron, 349; Brit. Guiana *Hym. parasitica* many spp. n., genn. n.
- Cockerell, 439; Peru *Apidae* 3 spp. n.—Cockerell, 444; Peru *Psenulus* sp. n.—Cockerell, 456; Patagonia *Anthidium* sp. n.
- Crawford, 515; *Chalcididae* gen. n.
- Ducke, 625; *Chrysididae*.—Ducke 626; Brazil *Eumenidae* spp. n.
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p. 111, *loquax* p. 117, *subtretracta* p. 115, *concuessa*, *esmeraldae*, p. 116, *A. (Traumoccia) militaris*, *tenuicula*, p. 118, *obsequens* p. 119, *A. (Donesia) restricta* p. 120, *A. (Nemota) meticulosa*, *informalis*, p. 121, *marcescens* p. 122, *A. (Hilara) fontis* p. 122, *A. (Adota) definita* p. 123, *scortea*, *scolopacina*, p. 124, *insons* p. 125, *pavidula*, *irrita*, p. 126, *spp. n.*, N. America, CASEY Mem. Col. 2.

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d 21

chalis, gaudens, p. 62, *eminens*
prigera p. 58, *illecta* p. 60, spp.
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tagiata, Madagaskar, spp. n.,
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us, p. 204, spp. n., U.S., *E. (Dianusa)*
k sp. n. California p. 205, CASEY
Col. 2.

crota oligotina sp. n. Missouri
CASEY T.c.

ota subgen. n. vide *Strigota*.

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n. California p. 161, CASEY Mem. Col. 2.

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kingi p. 142, spp. n., Australia, LEA
Proc. R. Soc. Victoria 23.

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170, *brunescens*, *boulderensis*, p. 167,
oblata p. 168, *sensilis* p. 170, *pallidipes*
p. 168, *utana* p. 169, *G. (Euliusa) lima-*
tula p. 172, spp. n., U.S., CASEY Mem.
Col. 2.

Gyrone *lepada, longicornis*, p. 217,
spp. n., U.S., CASEY T.c.

Gyronechina gen. n. p. 218, *longi-*
pennis sp. n. California p. 219, CASEY
T.c.

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185, spp. n., N. America, CASEY

subgen. n. vide *Thec-*

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p. 192, *hesperica* p. 193, *wickhami*,
frigidula, p. 194, *humilis* p. 195, *lepi-*
dula p. 196, spp. n., U.S., CASEY Mem.
Col. 2.

Hoplandria acudentata sp. n. Ohio,
DURY J. Soc. Nat. Hist. Cincinnati 21
p. 65.—*H. brittoni* sp. n. Connecticut p.
161, CASEY Mem. Col. 2.

Hydrosmecta odiosica p. 138, *fasti-*
diosa, salinasica, p. 139, U.S., *depreseeola*
Mexico p. 140, spp. n., CASEY T.c.

Ischnoglossa abscissa p. 16, *tenuicauda*,
intenta, p. 17, *alticola* p. 18, spp. n.,
U.S., CASEY T.c.

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CASEY T.c.

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in nidis *Termes malayanus* Java,
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p. 201, *iowensis* p. 200, spp. n., U.S.,
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gowina, BERNHAUER Verh. ZoolBot.
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sis sp. n. Monte Maggiore Istrien,
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colobopsis, *intrepidus*, p. 128, *pallidominor* p. 129, spp. n., Australia and Tasmania, LEA Proc. R. Soc. Victoria 23.

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Sipaliella subgen. n. vide *Sipalia*.

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Sonomota subgen. n. vide *Sipalia*.

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Teliusa malaca **sp. n.** Texas p. 172, CASEY T.c.

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Scydmaenilla constricta sp. n. Tasmania, LEA p. 187 T.c.

Scydmaenus clientulus, *colobopsis*, p. 181, *daveyi*, *glabripennis*, p. 182, *ectatommae* p. 183, *duplicatus*, *castaneoglaber*, p. 184, *microps*, *simplicicornis*, p. 185, spp. n., Australia and Tasmania, LEA T.c.

SILPHIDAE and CLAMBIDAE.

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Bathysciola lostiai arizensis p. 239 and *diabolica* p. 240, *subterranea simbruica* p. 233, n. subsp., JEANNEL Arch. Zool. 7.

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p. 153, PIC Echange 27.

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exilis p. 174, spp. n., Bosnia, REITTER
Ent. Bl. 7.

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BROUN p. 97 Tr. N. Zeal. Inst. 43.

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Mag. 47.

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CSIKI Rovart. Lap. 18 p. 138.

~~✓~~ *Hadesia* gen. n., *vasiceki* sp. n.
Herzegowina, MÜLLER Wien Ent. Ztg
30 p. 175.

Myrmicholeva gen. n. p. 190 near
Choleva, *lata*, *acutifrons*, p. 192, *punc-*
tata, *ligulata*, p. 194, spp. n., Australia,
LEA Proc. R. Soc. Vict. 23.

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feni Istrien, SCHATZMAYR Boll. Soc.
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1 Taf.

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pp. 166–179, *stenocoryphe* sp. n. Scot-
land p. 173, JOY Ent. Mag. 47.—*L.*
obesa und *dubia*, GERHARDT D. ent. Zs.
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ginata, FLEISCHER Naturalista sicil.
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and p. 43 Ent. Rec. 23.—*L. (Anisotoma)*
fleischeri sp. n. Europe, JOY p. 110 Ent.
Mag. 47.

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vestigator reductor, abb. n., REITTER
Entom. Ztg Wien 30 p. 106.

Parabathyscia luigionii p. 278 pl. vi
figs. 168–171, *latialis* p. 279 figs. 172–
175, spp. n., *spagnoloi devillei* n. subsp.
p. 283, *peragalloi* sp. n. p. 278, JEANNEL
Arch. Zool. 7.

Parapropus sericeus neumanni, *sim-*
plicipes, Nordbosnien, *taxi* Kroatien,
subsp. n., MÜLLER Entom. Ztg Wien
30 pp. 1–4.—*P. brevicollis* sp. n.
Bosnia, MÜLLER p. 234 Ent. Bl. Berlin
7.

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p. 364, JEANNEL Arch. Zool. 7.

Pholeuon; Bestimmungstabelle, *bokori*,
czarani, *mihoki*, *mocsaryi*, Ungarn,
spp. n., CSIKI Rovart. Lap. 18 pp. 105–
110.—*P. bokorianum* sp. n. Ungarn,
CSIKI Rovart. Lap. 18 p. 137.—*P.*
(*Parapholeuon*) *knirschi* sp. n. Ungarn,
BREIT Wien Ent. Ztg 30 p. 172.

Pholeuonidius pinkeri sp. n. p. 270
pl. vi figs. 160–181, JEANNEL Arch.
Zool. 7.

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linidae, BONDROIT p. 365 Ann. Soc.
ent. Belgique 55.

Scotocryptus inquilinus, SILVESTRI
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BOLIVAR p. 570 Bol. Soc. espan. 11.—
S. occidentalis p. 301 pl. vii fig. 208,
gracilicornis p. 312 pl. viii figs. 231–
232, spp. n., JEANNEL Arch. Zool. 7.

Speonomus pallaresamus sp. n.
p. lxxxiii figs. 1–2, *sancti-gervasi*
p. lxxxiv figs. 3–4, *ribagorzanus* p. lxxxv
fig. 5, *latebricola* p. lxxxvi figs. 6–7,
with var. *elongatus* p. lxxxviii, *arberus*
p. lxxxviii figs. 8–9, with var. *arcticollis*
p. xc fig. 10, *brieti* p. xc fig. 11, *bolivari*
p. xcii figs. 12–13, spp. n., JEANNEL
Arch. Zool. 8 notes.

Speophilus nom. n. pro *Perrinia*
Reitter 1885 nec Adams (1894 Mol-
lusca), *carrodilae* p. xciv fig. 14, *quadri-*
collis p. xciv figs. 15–16, spp. n., JEANNEL
Arch. zool. 8 notes.

Speoplanes subgen. n. vide *Apho-*
leuonius.

Troglocharinus hustachei sp. n.
p. xcvi fig. 17, JEANNEL Arch. zool.
8 notes.

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p. 370, JEANNEL Arch. zool. 7.

TRICHOPTERYGIDAE.

Deux *Trichopterygidae* africains ré-
cemment décrits, VUILLET *Insecta* 1
pp. 259–260 fig.

Bambara gen. n. p. 159, *joannisi*
sp. n. p. 160 fig., Africa, VUILLET
Insecta 1.

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SCAPHIDIIDAE.

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HISTERIDAE.

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PHALACRIDAE.

Stilbus oblongus var. n. *rauterbergi*, REITTER p. 78 Fauna Germ. 3.

NITIDULIDAE.

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Trachypholis decorata p. 126, *signata* p. 128, Birma, *dubreuilii* p. 130 India, *ornata* p. 132 Formosa, *ovata* p. 134, *griseus* p. 136, Sumatra, *insignis* p. 138 Java, *valida* p. 140 Malacca, *magna* p. 142 Java, *fulvicornis* p. 144 New-Guinea, *ritsemai* p. 146 Sumatra, *flavicornis* p. 148 Java, *lineata* p. 149 Singapore, *conradti* p. 151 Camerun, spp. n., GROUVELLE Notes Mus. Leiden 33.

Ulonotus plagiatus Pitt Island sp. n., BROUN p. 97 Tr. N. Zeal. Inst. 43.

CUCUJIDAE.

Laemophloeus molestus p. 137, *subpallidus* p. 139, *mendax* p. 140, Aus-

tralia, mauditus p. 143 Tasmania,
frater p. 144 Australia, *spp. n.*, GROU-
VELLE Proc. R. Soc. Vict. 24.

Silvanoprus *gen. n.* für *Silvanus*
fagi, REITTER p. 45 Fauna Germ. 3.

Silvanopsis *gen. n.* für *Silvanus*
denticollis, REITTER p. 44 Fauna Germ.
3.

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p. 148, Australia, *spp. n.*, GROUVELLE
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nodifer, REITTER p. 81 Fauna Germ. 3.

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Monoedus; syn. *Adimerus* p. 114,
SCHAEFFER J. New York Ent. Soc. 19.

MYCETOPHAGIDAE.

Calilendus *subg. n.* von *Mycetophagus*,
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winteri, REITTER Wien Ent. Ztg 30
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Typhaea fumata var. n. *obscura*,
KRAUSS-HELDRENGEN Riv. coleotter.
ital. 9 p. 109.

Ulolendus *subg. n.* von *Mycetophagus*,
REITTER p. 93 Fauna Germ. 3.

BYTURIDAE.

Byturus tomentosus, Metamorphose,
Eiablage, Futterpflanzen, Schaden im
Gouv. Moskau (Russ.), KOROLIKOV Sad.
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Gräbern, NETOLITZKY D. ent. National-
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n., BROUN p. 100 Tr. N. Zeal. Inst.
43.

BYRRHIDAE.

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phorus metallicus, REITTER p. 159
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Germ. 3.

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pl. i figs. 8-9, GROUVELLE Ann. Soc.
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Pachylmis convexa p. 274 pl. i fig. 2, *gibba* p. 275 fig. 1, spp. n., GROUVELLE Ann. Soc. ent. France 80.

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HETEROCERIDAE.

Heterocerus bellus sp. n. Bengal, GROUVELLE p. 317 Rec. Ind. Mus. 6.—*H. infuscatus* p. 107 Yunnan, *sauteri* p. 109 Formosa, spp. n., GROUVELLE Notes Mus. Leiden 33.

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(N-9186 j)

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d 22

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Neurybia gen. n. near *Euryaspilus*,
trifoveolata sp. n. Australia, p. 18.
THÉRY T.c.

Oedisterna pretoriae, *peringueyi*, p.
584, *nigritula* p. 586, *carinata* p. 588,
cicatricosa p. 594, *saga* p. 596, spp. n.,
S. Africa, KERREMANS Mon. Bupr. 5.

Philanthaxia nigra sp. n. Borneo,
THÉRY p. 20 Mem. Soc. ent. Belgique
18.

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KERREMANS Ann. Transv. Mus. 3
p. 92.

Pithiscus angustatus Montevideo p.
51, *vicinus* Brazil p. 52, *victoriae* Chile,
mayeti Brazil, p. 53, spp. n., THÉRY
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Pseudanilara gen. n., *roberti* sp. n.
Australia, THÉRY p. 32 T.c.

Psiloptera (*Damarsila*) *gunningi* sp. n.
S. Africa, KERREMANS Ann. Transv.
Mus. 3 p. 90.—*P. (Lampetis) persica*
Persia p. 170, *tabarana* p. 189, *sanghana*
p. 190, *bottegoi* p. 192, *P. (Darmasila)*
campanae p. 208, *angolensis* p. 211,
imitator p. 214, Africa, spp. n., *montana*
n. n. for *laeta* Wat. p. 215, *peringueyi*
p. 228, *iridiventris* p. 234, *bouvieri* p.
238, *lemarineli* p. 243, *kolbei* p. 244,
caecior p. 249, *infralaevis* p. 262,
germani p. 271, *meyerei* p. 293, *luctuosa*
p. 294, *selecta* p. 303, spp. n., Africa,
P. (Polybothris) sculpticollis n. n. for
Compsoglypta perrieri Fairm. p. 347,
blanchardi p. 348, *antiqua* p. 351,
gratiosa p. 353, *angusta* p. 360, *mar-*
morata p. 406, *pulverulenta* p. 422,
interundata p. 432, *hildebrandti* p. 437,
coelestis p. 444, *geminata* p. 460, *vermi-*
culata p. 463, *carinifrons* p. 472, *aenei-*
collis p. 481, *incerticolor* p. 490, *quadri-*
punctata p. 499, spp. n., Madagascar,
fallaciosa n. n. for *obscura* Th. p. 511,
violaceiventris p. 513, *angulicollis* p.
533, *linearis* p. 534, Madagascar,
speculifera p. 551, *obesa* p. 553, Comoro
islds., spp. n., KERREMANS Mon. Bupr.
5.

Sphenoptera alluaudi sp. n., THÉRY
p. 371 Ann. Soc. ent. France 79.—*S.*
agrippina sp. n. Persia, KERREMANS p.
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Italia, LEONI Riv. coleotter. ital. 9
p. 5.—*S. gunningi*, *leighi*, *pretoriensis*,
spp. n., S. Africa, KERREMANS Ann.
Transv. Mus. 3 p. 90.—*S. longipennis*
Natal p. 3, *mandarina* China p. 4,

elliptica Natal p. 6, *himalayensis* India
p. 7, *behanzini* Dahomey p. 8, *sikumbae*
p. 9, *nigriventris* p. 10, E. Africa,
tondui Algeria p. 11, spp. n., THÉRY
Mem. Soc. ent. Belgique 18.

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parallela, varr. n., THÉRY p. 371 Ann.
Soc. ent. France 79.

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THÉRY p. 374 Ann. Soc. ent. France
79.

Stigmodera (*Themognatha*) *quinque-*
fossulata p. 54, *S. johannae* p. 55, spp. n.,
Australia, *flavipennis* Geh. characters
p. 55, THÉRY Mem. Soc. ent. Belgique
18.

Yamina sanguinea varr. n. *semi-*
reducta and *subfasciata*, PIC p. 105
Echange 27; varr. n. *ardoisi*, *oblique-*
fasciata and *schrammi*, PIC p. 129 T.c.

ECNEMIDAE AND THROSCIDAE.

Adelothyreus bonvouloiri sp. n.,
FLEUTIAUX p. 242 Ann. Soc. ent. France
80.

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LENG J. New York Ent. Soc. 19 p.
261.

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TIAUX p. 236 Ann. Soc. ent. France 80.

Dromaeolus palpalis p. 238, *subcylindricus*
p. 239, spp. n., FLEUTIAUX T.c.

Fornax colonus sp. n., FLEUTIAUX
p. 240 T.c.

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mathiesseni, REITTER p. 203 Fauna
Germ. 3.

Isorhipis melasoides ab. n. *bicolor*,
REITTER p. 205 T.c.

Megathambus gen. n. für *Dromaeolus*
maronita, REITTER p. 201 T.c.

Melasis buprestoides ab. n. *semicas-*
taneus, REITTER p. 208 Fauna Germ. 3.

Nematodes guadeloupensis, *biimpres-*
sus, p. 244, spp. n., FLEUTIAUX Ann.
Soc. ent. France 80.

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RHIPICERIDAE.

Sandalus gabilloti sp. n., PIC p. 117 Echange 27.

DASCILLIDAE, CYPHONIDAE.

Cyphonocerus sanguineus sp. n., PIC p. 143 Echange 27.

Microcara pilosula sp. n. Sicilien REITTER p. 244 Fauna Germ. 3.

Dascillus pallidofemoratus, bengalensis, holzi, striatus, spp. n., p. 142, *subrufescens* n. var. p. 143, PIC Echange 27.

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Allotarsus monstrosipes sp. n. p. 97, PIC Echange 27.

Amanimalthodes subgen. n. in *Prosthaptus*, *diversipes* sp. n. p. 133, PIC Echange 27.

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Atyphella salomonis p. 172 Solomon Islds. *carolinæ* Caroline Islds., *scabia*, p. 173, *obsoleta* and var. *immaculata*, *ignota*, p. 174, N. Guinea, spp. n., OLIVIER Bull. Soc. ent. France 1911.—*A. salomonis* var. n. *limbatipennis* p. 165, PIC Echange 27.

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Echange 27.—*C. subemarginata*, *duchoni*, *purpurpubens* sp. n. p. 143, PIC Echange 27.—*C. (Telephorus) celebensis*, *semilimbata*, *clypeifer*, spp. n. p. 150, PIC Echange 27.—*C. subatriceps*, *latenigripicea*, p. 172, *albidolimbata* p. 173, spp. n., PIC Echange 27.

Cerallus (Anthrodromius) rufolimbatus sp. n. p. 169, and *ludovici* var. p. 170, PIC Echange 27.

Ceylanidrilus gen. n. voisin de *Harmantelia*, *bipartitus* sp. n., PIC p. 187 Echange 27.

Charopus rubronotatus sp. n. p. 105, PIC Echange 27.

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Chionotopus bimaculatus sp. n., PIC p. 107 Echange 27; *inhumeralis* var. n., Id. Bull. Soc. ent. France 1911 p. 91. [? *Malacodermidae*: name not to be found.]

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Daiphron multicostatum, *angusticeps*, spp. n., p. 174, PIC Echange 27.

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Dryptelytra cayennensis var. n. *brevivittis*, *atricollis* sp. n., p. 164, PIC Echange 27.

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Eros nigripes sp. n. Minnesota p. 121, SCHAEFFER J. New York Ent. Soc. 19.

Eucteis (*Paralichas*) *bicoloripes*, *subnitidus*, spp. n., p. 143, PIC Echange 27.

Falsoanthocomus gen. n. voisin de *Anthocomus*, *unicolor* sp. n. p. 158, PIC Echange 27.

Falsophaeopterus gen. n. voisin de *Phaeopterus*, *fruhstorferi*, spp. n., p. 187, PIC Echange 27.

Flabellontelus gen. n. voisin de *Oontelus*, *armitagei* sp. n. p. 133, PIC Echange 27.

Flabellototreta gen. n. voisin de *Ototreta* p. 155, *fruhstorferi*, *obscuriceps*, spp. n., p. 156, PIC Echange 27.

Gorhamia gen. n. voisin de *Harmatelia*, *compressicornis* sp. n., PIC p. 186 Echange 27.

Hapalochrus bicornutus sp. n. p. 101, PIC Echange 27.—*H. crassicornis*, *rollei*, *sinuatifipes*, spp. n., p. 123, PIC Echange 27.—*H. pectinatus* sp. n. p. 127, PIC Echange 27.

Haplamaurus setulosus, *riveti*, *cyaneocens* p. 210, spp. n., *riveti aeneipennis* var. n. p. 209, BOURGEOIS Bull. Mus. Paris 1911.

Haplobothris peruvianus sp. n. p. 165, PIC Echange 27.

Haplocnemus latipennis sp. n. p. 146, PIC Echange 27.—*H. (Ischnopalpus) lizensis* p. 158 sp. n. Morocco, BOURGEOIS Bull. Soc. ent. France 1911.—*H. latipennis rechmayana* p. 169, n. var., PIC Echange 27.

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Hypebaeus tripartitus var. n. *tauricola* p. 106, PIC Echange 27.

Idgia gorhami, *submetallica*, spp. n., *diversipennis* var. n. p. 241, PIC Bull. Soc. ent. France 1911.—*I. inapicalis* p. 345, *subcostulata*, *longipennis*, p. 346, spp. n., PIC op. cit. 1910.

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Lycostomus femoratus p. 120, *simulans* p. 121, spp. n., Arizona, SCHAEFFER J. New York Ent. Soc. 19.

Lyropaeus dohertyi p. 166, *longipennis* p. 168, *bicolor* p. 166, *spp. n.*, PIC Echange 27.

Macrosilis gen. n. voisin d'*Incisilis*, *fortunei*, *discolineatus*, *spp. n.*, p. 173, PIC Echange 27.

Malachius perrini nom. n. für *marginicollis* (Russ.), JACOBSON Käfer Russlands 1911 p. 696.—*M. picoterminatus* *sp. n.* p. 145, PIC Echange 27.—*M. vittatus* var. n. *subhumeralis*, *schelkownikowi* *sp. n.* p. 113, PIC Echange 27.

Malchimus bolemeyeri *sp. n.*, *tunicatus* var. n. *abeillei*, p. 177, PIC Echange 27.

Malthinus bordei *sp. n.*, *nigribuccis* var. n. *pubescens*, PIC p. 121 Echange 27.—*M. binotaticollis* *sp. n.* p. 145, PIC Echange 27.

Malthodes mysticus var. n. *megalophthalmus* p. 268, *guttifer* var. n. *guttigenus*, *spretus* var. n. *guttulifer*, p. 269, REITTER Fauna Germ. 3.—*M. zurcheri* *sp. n.* with var. *lividana*, PIC p. 177 Echange 27.—*M. sidonius* *sp. n.* p. 145, PIC Echange 27.—*M. unguipygus*, *cypricus*, p. 137, *subunicolor* p. 138, *spp. n.*, PIC Echange 27.

Mauroniscus gen. n., *roberti* *sp. n.*, p. 211, BOURGEOIS Bull. Mus. Paris 1911.

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Oontelus gorhami *sp. n.* p. 123, PIC Echange 27.—*O. diversicornis* *sp. n.* p. 133, PIC Echange 27.

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Pachymesiosis gen. n. p. 102, *sumatrensis* *sp. n.* p. 101, PIC Echange 27.

Photinus; sex-relations, McDERMOTT pp. 399–406 Canad. ent. 43.—*P. joergenseni* *sp. n.* Misiones, OLIVIER Rev. Mus. La Plata 17 p. 89.

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Plateros collaris *sp. n.* p. 310 Ecuador, BOURGEOIS Bull. Mus. Paris 1910.

Plectonotum latior, *robusticorne*, p. 122, *wagneri* p. 123, *spp. n.*, PIC Echange, 27.—*P. testaceicollis*, *impressithorax*, *bogotense*, *gorhami*, p. 175, *germaini*, *apicicorne*, p. 179, *simplicicorne* p. 180, *spp. n.*, PIC Echange 27.

Podabrus pilipes, *multilimbatus*, *spp. n.*, p. 271, PIC Naturaliste 32.

Pseudacroleptus subgen. n. in *Acroleptus* Bourg., *obscuricollis*, p. 165, *sinuatus* p. 166, *spp. n.*, PIC Echange 27.

Pseudopachymesia gen. n. p. 99 voisin de *Pachymesia* Westw. *wallacei*, *sp. n.* p. 100, PIC Echange 27.

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LAGRIIDAE.

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Zonitis pulcherrima p. 130, *surinamensis* p. 131, spp. n., PIC Naturaliste 32.—*Z. semiruber* sp. n. p. 101, PIC Echange 27.—*Z. scutellaris* var. n. *prescutillaris* p. 139, PIC T.c.—*Z. nitidissima, celebensis, batjanensis, neoguineensis, mitschkei, javana*, spp. n., p. 147, PIC T.c.—*Z. flava* ab. n. *atripes*, REITTER p. 297 Fauna Germ. 3.

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OEDEMERIDAE.

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Conomorphus rufescens sp. n. p. 123, PIC T.c.

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PYTHIDAE.

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PYROCHROIDAE.

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223 *Insecta*.

SYSTEMATIC.—CURCULIONIDAE.

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Salatiga Cultuurgids 13 p. 31.

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MITCHELL & PIERCE Proc. Ent. Soc.
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f. 2, MARSHALL Rep. Wellcome Lab.
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Ges. 33.—*B. saccharivora* sp. n. For-
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sp. n. p. 57, DESBROCHERS Frelon 17.

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Mexico pl. xv f. 17 p. 332, CHAMPION
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f. 1, *microphthalmus* f. 2, p. 298,
CHAMPION T.C.

Bubaris apicalis p. 90, *pubescens*
p. 91, spp. n., Australia, LEA Mem.
Soc. ent. Belgique 18.

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FORMÁNEK Wien Ent. Ztg. 30 p. 208.

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sp. n. S. Australia, LEA p. 103 Mem.
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Cautoderus gen. n. *Otiiorhynchinae*
p. 169, *mexicanus* sp. n. p. 170 pl. vii
f. 6, SHARP Biol. Centr.-Amer. Col. 4
pt. 3.—*C. nigrocinctus* sp. n. Mexico
pl. xv f. 27 p. 339, CHAMPION T.C.

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allies, *simillimus* sp. n. = (*moelleri*
Schultze), EDWARDS p. 209 Ent. Mag.
47.

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illustris sp. n. Mexico pl. vii f. 7,
SHARP p. 170 Biol. Centr.-Amer. Col.
4 pt. 3.

✕ *Chaetopleurus* gen. n. near *Exoph-
thalmus*, *adipatus* pl. xii f. 17, p. 270,
rufovittatus f. 18, *quadrioveatus* f. 19
p. 271, spp. n., Centr. America, CHAM-
PION Biol. Centr.-Amer. Col. 4 pt. 3.

Cherrus strigiceps, *simplicipennis*,
spp. n., Austral., LEA pp. 178–179 Mitt.
Mus. Berlin 5.

Choerocephalus distincticornis p. 139,
rufolimbatus p. 138, spp. n., PLO Echange
27.

Cionus, de la Scrofulaire, LE CERF
Bul. soc. acclim. 58 pp. 13–18 av. fig.

Claeoteges granulatus p. 276 pl. xii
f. 26, *tuberculosis* f. 27, *obliteratus* f. 28,
p. 277, spp. n., Centr. America, *virusus*
Pasc. f. 25 p. 275, CHAMPION Biol.
Centr.-Amer. Col. 4 pt. 3.

Cleistolophus viridimargo sp. n. Hon-
duras pl. xv f. 16 p. 331, CHAMPION
T.C.

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Miocene WICKHAM Bull. Amer. Mus.
30 p. 66.

Cneorrhinus albigruttulus sp. n. For-
mosa, MATSUMURA p. 142 Mem. Soc.
ent. Belgique 18.

Coleocerus virescens pl. xiv f. 12,
denticollis f. 13, p. 307, *crassipes* p. 308,
rotundicollis p. 309 f. 17, spp. n.,
Mexico, *setosus* Boh. f. 11, *variegatus*
figs. 14 & 15, *marmoratus* f. 16, CHAM-
PION Biol. Centr.-Amer. Col. 4 pt. 3.

Compsus caeruleipes Centr. America
pl. xiii f. 15, *18-signatus* Venezuela
f. 16, p. 288, *nigropunctatus* Centr.
America p. 289 f. 19, spp. n., *auri-
cephalus* Say figs. 17 & 18, CHAMPION
T.C.

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land, LEA p. 123 Mem. Soc. ent. Bel-

gique 18.—*C. simsoni* sp. n. Tasmania, LEA p. 200 Mitt. Mus. Berlin 5.

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Cubicorrhynchus globicollis sp. n. N. S. Wales, LEA p. 84 Mem. Soc. ent. Belgique 18.

Cydnianirus argenteus = (*Polydus donceli* Bov.) pl. xiv f. 6 p. 302, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Cyphus forreri pl. x f. 16, quadrupunctatus f. 18, p. 238, roseiventris f. 19, yucatanus f. 20, p. 239, spp. n., Centr. America, modestus Gyll. figs. 12–15, lautus f. 17, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

†*C. subterraneus* sp. n. Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 64.

Decasticha gen. n. near *Eustales*, subocellata pl. xii f. 21 p. 273, quadruplagiata f. 22, tetrastigma f. 23, p. 274, decemguttata f. 24 p. 275, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Derosomus scutellaris sp. n. Guatemala, SHARP p. 169 Biol. Centr.-Amer. Col. 4 pt. 3.—*D. glaucus* sp. n. Mexico pl. xv f. 26 p. 339, CHAMPION T.c.

Dialeptopus plantaris Pasc. = (*granulatus* Pasc., *collaris* Boh. = (*sepidioides* Pasc.)), LEA p. 88 Mem. Soc. ent. Belgique 18.

Diaprepes albofasciatus pl. vii f. 22 Honduras, pulverulentus Nicaragua, p. 180, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Dicomada obsti sp. n. Austral., LEA p. 192 Mitt. Mus. Berlin 5.

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Dysostines pilipes and *pustulosus* Pasc. are ♂ & ♀, and belong to *Timareta*, LEA p. 66 Tr. R. Soc. S. Austral. 35.

Echinocnemus sahlbergi sp. n. Palästina, SCHILSKY Küster u. Kraatz 47 Nr. 97.

Ecrizothis boviei sp. n. Australia, LEA p. 71 Mem. Soc. ent. Belgique 18.

Elissa laticeps pl. xv f. 18 p. 332, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Elleschodes tenuirostris sp. n. Tasmania, LEA p. 194 Mitt. Mus. Berlin 5.

Eniopea tenuis p. 96, *viridisquama*, *nebulosa*, p. 97, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Entimus arrogans pl. xiv f. 5 p. 301, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Epagriopsis gen. n. for *Epagrius* Sh. nee Schönh., CHAMPION p. 329 T.c.

Epagrius Schönh. = (*Bradyrhynchus* Sh.), *nubilosus* pl. xv f. 13 = (*tolucae* Sh.), p. 329, *rugicollis* f. 14, *retrorsus* sp. n. Mexico f. 15, p. 330, CHAMPION T.c.

Epicaerus macropus pl. xv f. 8, *macropterus* f. 9, p. 324, *elegantulus* f. 11 p. 326, *truquianus*, *joveifrons* f. 12, p. 327, spp. n., Mexico, *depilis* Boh., *monclovae* ♂ pl. xv f. 10, p. 325, CHAMPION T.c.

Episomus albinus sp. n. Formosa, MATSUMURA p. 141 Mem. Soc. ent. Belgique 18.

Eristus blackburni p. 99, *pallidicornis* p. 100, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Eucloeocerus gen. n., *conicicollis* pl. xiv f. 18, p. 309, *guttularius* f. 19, *fuscovarius*, p. 310, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Eudiagogus pulcher p. 311 pl. xiv f. 20, CHAMPION T.c.

Eugnathus heydeni sp. n. Yokohama, SCHILSKY Küster u. Kraatz 47 Nr. 87.

Eupagoderes rotundatus pl. xv f. 5, *turbinatus* f. 6, p. 320 *depressirostris* p. 321, spp. n. Mexico, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Euperitelus gen. n., *albovarius* sp. n. Mexico pl. xv f. 30, p. 341, CHAMPION T.c.

Eustales curvimanus sp. n. Guatemala p. 272 pl. xii f. 20, CHAMPION T.c.

Eustylus sexguttatus p. 291 pl. xiii f. 20, *setipennis* f. 21, *quadrigibbus* f. 23, p. 292, *ruptus* p. 293 f. 24, *veraeapacis* f. 26, *chiriquensis* f. 27, p. 294,

subapterus f. 28 p. 295, *cinericius* p. 296, **spp. n.**, Centr. America, *striatus* Boh. f. 22, *grypsatus* f. 25, CHAMPION T.c.

Exophthalmus fasciatus p. 252 pl. xi f. 4, *ornatus* f. 5, *interpositus* f. 6, p. 253, *margaritaceus* f. 9, *albidus* f. 10, p. 255, *vitticollis* p. 256 figs. 12–14, *cupreipes* f. 15, *carneipes* f. 16, p. 257, *distigma* f. 21, *sculptus* f. 22, p. 259, *triangulifer* p. 261 f. 27, *tessellatus* f. 28, *albolineatus* f. 29, p. 262, *albo-vittatus* f. 30, *duplicatus* pl. xii f. 1, p. 263, *clathratus* f. 2, *vermiculatus* f. 3, *caeruleovittatus* f. 4, p. 264, *bilineatus* f. 5, *sulcipennis* f. 6, p. 265, *lunaris* figs. 7 & 8, *viridilineatus* f. 9, p. 266, *plicatus* f. 11, *sulcicus* figs. 12–15, p. 268, **spp. n.**, Centr. America, *nicaraguensis* Bov. f. 3 p. 252, *verecundus* f. 7, *carinirostris* f. 8, p. 254, *opulentus* f. 11 p. 256, *agrestis* figs. 17–20 p. 258, *nubilis* figs. 23 & 24, *scalaris* f. 25, p. 260, *impositus* f. 26 p. 261, *jekelianus* pl. xii f. 10 p. 267, *roralis* f. 16 p. 269, CHAMPION T.c.

Fergusonia **gen. n.** inc. sed. p. 125, *cristata* p. 126, *bituberculata* p. 127, **spp. n.**, Australia, LEA Mem. Soc. ent. Belgique 18.

Geralophus scudderi **sp. n.** Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 65.

Germariella **gen. n.** p. 234, for *Cyphus juvenicus*, CHAMPION Biol. Centr. Amer. Col. 4 pt. 3.

Griffithia **gen. n.** near *Blepiarda*, *anomala* **sp. n.** Tasmania, LEA p. 113 Mem. Soc. ent. Belgique 18.

Gronops tristiculus p. 200, *curtulus* p. 202, **spp. n.**, DESBROCHERS Frelon 17.

Hackeria **gen. n.** near *Myloccerus* p. 67, *viridivaria* **sp. n.** Queensland p. 68, LEA Mem. Soc. ent. Belgique 18.

Hadramphus **gen. n.** *Cylindrorhin.* p. 104, *spinipennis* **sp. n.** p. 105, Pitt Island, BROWN Tr. N. Zeal. Inst. 43.

Hadromerus scintillans p. 182 pl. vii f. 25, *micans* f. 28 p. 183, *cretatus* f. 31, *fulgens* figs. 32 & 33, p. 184, *rufipes* f. 34 p. 185, **spp. n.**, Central America, *dejeani* f. 27, *opalinus* figs. 29 & 30, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Hadrophyes **subg. n.** vide *Nanophyes*, REITTER Entom. Ztg Wien 30 p. 246.

(N-9186 j)

Haplonyx seminudus p. 108, *montanus* p. 109, **spp. n.**, Australia, LEA Mem. Soc. ent. Belgique 18.

Hilipus carinicolis **sp. n.** Panama ? CHAMPION p. 94 Ann. Nat. Hist. 7.

Hoplocossonus **gen. n.** p. 123, *bicolor* **sp. n.** Australia p. 124, and *Coss. lethargicus* Oll., LEA Mem. Soc. ent. Belgique 18.

Hydrotimes **gen. n.**, *natans* **sp. n.** Argentina, KOLBE p. 316 Deutsche ent. Zs. 1911.—Argentinischen Rüsselkäfer, der im Wasser schwimmen kann, FRANCK D. ent. Zs. 1911 p. 141.

Hypera punctatus pp. 396–411, TITUS Ann. Ent. Soc. Amer. 4.

Hyphaeria geometrica **sp. n.** Austral., LEA p. 190 Mitt. Mus. Berlin 5.

Hypoptus insularis **sp. n.** Antilles p. 302, *H. macularis* pl. xiv figs. 7 & 8 p. 203, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.—*H. jekeli* **sp. n.** Mexico, CHAMPION p. 144 T.c.

Irenarchus fossilis, synonymy, CHAMPION p. 276 Ent. Mag. 47.

Isax planipennis **sp. n.** Australia, LEA p. 114 Mem. Soc. ent. Belgique 18.

Isodacrys **gen. n.** *Otiiorhynchus guatemalensis* Dueñas pl. vii f. 14, p. 175, *orizabae* f. 15, *mexicanus* f. 16, *minutus* f. 17, p. 176, Mexico, **spp. n.**, SHARP Biol. Centr.-Amer. Col. 4 pt. 3.—*I. schwarzi* **sp. n.** Mexico pl. xv f. 29 p. 341, CHAMPION T.c.

Isodrusus **gen. n.** *Otiiorhynchinae* p. 207, *debilis* **sp. n.** Guatemala p. 208 pl. viii f. 32, SHARP Biol. Centr.-Amer. Col. 4 pt. 3.

Isotrogus castelnavi **sp. n.** N. S. Wales, LEA p. 122 Mem. Soc. ent. Belgique 18.

Kentrallax flavisetosus Pitt Island **sp. n.**, BROWN p. 106 Tr. N. Zeal. Inst. 43.

Laemosaccus tropicus p. 105 *nigriceps* p. 106, **spp. n.**, Australia, LEA Mem. Soc. ent. Belgique 18.—*L. hieroglyphicus* **sp. n.** Austral., LEA p. 195 Mitt. Mus. Berlin 5.

Leptops castelnavi **sp. n.** Queensland, LEA p. 73 Mem. Soc. ent. Belgique 18.

Lipothyrea arrowi **sp. n.** Queensland, LEA p. 75 T.c.

Lixus cylindricus, biologia, VITALE Naturalista sicil. 21 pp. 137-142.—*L. imponderosus* New South Wales sp. n., LEA p. 79 Trans. R. Soc. S. Austral. 35.

Lybaea pretiosa p. 109, *trifasciata* p. 111, *tricolor* p. 112, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Magdalis mariae sp. n. Bosnien, FORMÁNEK Wien Ent. Ztg 30 p. 205.

†*M. striaticeps* sp. n. Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 66.

Mandalotus severini sp. n. Tasmania, LEA p. 76 Mem. Soc. ent. Belgique 18.—*M. dentipes*, *taylori*, p. 67, *carinatifipes* p. 68, *interocularis* p. 69, *irrasus* p. 70, *acutangulus* p. 71, *angustipictus* p. 72, *pondericornis* p. 73, *squamibundus* p. 74, Australia, spp. n., LEA Trans. R. Soc. S. Austral. 35.

Mazenes gen. n., *bifoveatus* pl. xiii f. 4 p. 280, *geminatus* f. 5, *lineatus* f. 6, p. 281, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Mechistocerus punctiventris p. 117, *duplicatus* p. 118, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Mecocorynus cristatus, HELLER D. ent. Nationalbibl. Berlin 2 p. 79.

Megalostylodes gen. n. p. 246, *hirsutus* sp. n. Mexico p. 247 pl. x f. 35, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Megalostylus tomentosus pl. x. f. 24, *brevipilis* f. 26, p. 243, *fusiformis* f. 32 p. 245, *dilatocollis* f. 33, *macrophthalmus* f. 34, p. 246, spp. n., Mexico, *sturmi* Boh. figs. 22 & 23, *rhodopus* f. 25, *albicans* figs. 27-29, *splendidus* figs. 30 & 31, CHAMPION T.c.

Melanterius leptorrhynchus sp. n. Austral., LEA p. 197 Mitt. Mus. Berlin 5.

Merimnetes australis Boisd. (as *Lagostomus*), LEA p. 69 Mem. Soc. ent. Belgique 18.

Meriphys granulatus sp. n. Austral., LEA p. 191 Mitt. Mus. Berlin 5.

Metallites pici sp. n. Zante, SCHILSKY Küster u. Kraatz 47 Nr. 36.

Methypora tibialis sp. n. Austral., LEA p. 186 Mitt. Mus. Berlin 5.

Microlarinus lareyniei, Mœurs, PICARD Feuille jeunes natural. Paris 41 p. 50.

Mimographopsis gen. n., *viridicans* pl. x. figs. 1 & 2, p. 229, *pustulatus* p. 230 figs. 3-5, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Mimographus mexicanus sp. n. p. 231 pl. x f. 6, CHAMPION T.c.

Minyomerus = (*Pseudelissa* Cas.), CHAMPION p. 332 T.c.

Misophrice hobleri p. 81, *cristatifrons orthorrhina* p. 82, *carteri* p. 83, Australia, spp. n., LEA Trans. R. Soc. S. Austral. 35.

Mononychus punctum-album, race pyrénéenne, VUILLET *Insecta* 1 p. 10; *rondoui* n. var. p. 63, VUILLET Feuille jeunes Nat. 41.

Mylocerus brunneus, *guttulus*, spp. n., Formosa, MATSUMURA p. 141 Mem. Soc. ent. Belgique 18.—*M. multimaculatus*, *foveifrons*, p. 64, *hardcastlei* p. 65, Queensland, spp. n., LEA Trans. R. Soc. S. Austral. 35.—*M. basicollis* p. 63, *subapterus* p. 64, *mastersi* p. 65, *mirabilis* p. 66, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Mythites granulatus sp. n. Australia, LEA p. 92 T.c.—*M. tuberculatus* sp. n. Austral., LEA p. 183 Mitt. Mus. Berlin 5.

Nanophyes gracilis, food-plant, CHAMPION p. 214 Ent. Mag. 47.—*N.* (subg. n. *Hadrophyes*) *auletoides* sp. n. Transkaukasus, REITTER Entom. Ztg Wien 30 p. 246.

Naupactopsis gen. n., *delumbis* pl. xii figs. 29 & 30, p. 278, *europictus* pl. xiii figs. 1 & 2, *sitonoides* f. 3, p. 279, spp. n. Mexico, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Naupactus sulfuratus p. 232 pl. x figs. 7 & 8, *virescens* figs. 9 & 10, *laticeps* f. 11, p. 233, spp. n., Centr. America, CHAMPION T.c.

Neomerimnetes sobrinus p. 70, *rivularis* p. 71, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Notonophes angulicollis sp. n. Austral., LEA p. 181 Mitt. Mus. Berlin 5.

Omius villosus sp. n. Russisch-Polen, FORMÁNEK Wien Entom. Ztg 30 p. 203.

Omydus oblongopunctatus sp. n. Austral., LEA p. 199 Mitt. Mus. Berlin 5.

Ophryastes tetratobus p. 318 pl. xv f. 1, *collaris* p. 319, figs. 2 & 3, *spp. n.*, Mexico, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Orchestes fagi, earlier stages, TRÄGÅRDH Entomol. Tidskr. 32 pp. 73–78.—*O. canus*, life-history, HART pp. 83–86 figs. Rep. Entomol. Illinois 26.

†*Otiorynchites florissantensis* *sp. n.* Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 64.

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Oxycorynus bruchi *sp. n.* Argentinien, HELLER Entom. Ztg Wien 30 pp. 5–8.

Oxyops minuscula N. W. Australia *sp. n.*, LEA p. 79 Trans. R. Soc. S. Austral. 35.

Pachnaeus litus pl. vii f. 24 p. 181, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Pachyrhynchus, HEYDEN Ber. Senckenb. Ges. 42 pp. 84–86 1 Taf.

Pachyura pyriatra N. S. Wales *sp. n.*, LEA p. 86 Trans. R. Soc. S. Austral. 35.

✓ *Pandeleiteinus* *gen. n.* for *P. submetallicus* Schaeff. pl. viii f. 31, CHAMPION p. 207 Biol. Centr.-Amer. Col. 4 pt. 3.

Pandeleiteius erubescens pl. vii f. 35 p. 188, *boops* pl. viii f. 1, *femoralis*, p. 189, *hieroglyphicus* f. 2, *ephippiatus* f. 3, p. 190, *clavisetis* f. 4, *flexilis* f. 5, *crispus* f. 6, p. 191, *cucullatus*, *cuneatus* f. 7, p. 192, *obliquus* f. 8, *varicolor* f. 9, p. 193, *hispidus* f. 10, *brevipes* f. 11, p. 194, *conspersus* f. 12 p. 195, *hirtipes* f. 14 p. 196, *inflatus* f. 15, *laticeps* f. 16, p. 197, *armatus* f. 17, *ornatifrons* f. 18, p. 198, *viridiventris*, *quickensis*, *quadrinodosus*, p. 199, *brevinasus* f. 20, *maculicollis* f. 21, p. 200, *fasciatus* f. 22, *undatus* f. 23, p. 201, *vitticollis* f. 24 p. 202, *amulae*, *sublineatus* f. 25, p. 203, *sinuatus* f. 26, *ciliatipennis* f. 27, p. 204, *microcephalus*, *albisquamis* f. 28, p. 205, *nodifer* f. 29, *longicollis* f. 30, p. 206, *spp. n.*, Centr. America etc., *tibialis* Boh. f. 13 p. 195, CHAMPION T.C.

Pantomorus = (*Aramigus* and *Phacopholis* Horn) *P. fulleri* Horn pl. xv f. 19, p. 333, *viridis* f. 23 p. 336; *P. horridus* f. 20 p. 334, *trituberculatus* p. 337, *sulfureus* f. 24 p. 338, *spp. n.*, Mexico, CHAMPION T.C.

(N-9186 j)

* *Parasomus* *gen. n.*, *Otiorynchidae*, *jansonii* *sp. n.* Nicaragua pl. vii f. 13, SHARP p. 174 Biol. Centr.-Amer. Col. 4 pt. 3.

Pelororhynchus interstitialis *sp. n.* Austral., LEA p. 188 Mitt. Mus. Berlin 5.

Pentarthrum dissimilum, *auripilum*, Pitt Island, *spp. n.*, BROWN p. 109 Tr. N. Zeal. Inst. 43.

Peripagis rufipes, variation, LEA p. 74 Mem. Soc. ent. Belgique 18.

Perperus = (*Pantopocus* = *Centyres*), LEA p. 95 T.C.—*P. litoralis* p. 77, *vermiculatus* p. 78, Australia, *spp. n.*, LEA Trans. R. Soc. S. Austral. 35.—*P. parvicornis*, *angustibasis*, *spp. n.*, Tasman., Austral., LEA p. 185 Mitt. Mus. Berlin 5.

Phyllobius rufitarsis *sp. n.* p. 98, PIC Échange 27.—*P. schneideri* Kaukasus Nr. 4, *paganettii* Hal. Nr. 5, *corpulentus* Sibirien Nr. 7, *solaris* Mongolei Nr. 9, *japonicus* Japan, *obscuripes* Turkestan, *gracilipes* Amur, *similis* Baikal-See, *undatus* Libanon, Nr. 11–15, *holtzi* Nr. 19, *insularis*, *vagus*, *seidlitzii*, Nr. 22–23, Griechenland, *pedestris* Sibirien, *lenkoranus* Caspisches Meer, *lederi* Kaukasus, Nr. 26–27, *brenskei* Griechenland Nr. 33, *spp. n.*, SCHILSKY Küster u. Kraatz 47.

Phrynixus asper Pitt Island *sp. n.*, BROWN p. 104 Tr. N. Zeal. Inst. 43.

Phytonomus variabilis, biologia, MARTELLI Boll. Lab. Zool. Portici 5 pp. 226–230.—*P. maritimus* *sp. n.* Massachusetts p. 432 pl. xxix ff. 8–9, TITUS Ann. Ent. Soc. Amer. 4.

Phytoscapus formosanus *sp. n.* Formosa, MATSUMURA p. 142 Mem. Soc. ent. Belgique 18.

Pissodes similis p. 44 pl. iii f. 1, *utahensis*, *barberi*, p. 45, *sitchensis* p. 47 pl. v f. B & pl. xiii ff. 5–7, *engelmanni* p. 47 pl. vi f. 5, *approximatus* p. 49 pl. vi f. 7 & pl. xv ff. A–B, *schwarzi* p. 50 pl. iii f. 8 & pl. xvi f. B, *canadensis* p. 51, *deodarae* p. 52, *californicus*, *yosemite*, p. 53 pl. xvi f. A, *webbi* p. 54, *radiatae* p. 55 pl. iii f. 15, *fiskei* p. 59 pl. iii f. 18 & pl. xii, *nigrae* p. 59, *puncicollis* pl. iv f. 20, *murrayanae*, *coloradensis*, p. 60, *alascensis* p. 61, *burkei* p. 62 pl. iv f. 25, *piperi* p. 62 pl. iv f. 26 & pl. v f. A, *fraseri* p. 63 pl. vi f. 28, *curriei* p. 65 pl. vi f. 30, d 23—2

HOPKINS U. S. Dept. Agric. Ent. Techn. 20.

Platyomida versicolor Pitt Island sp. n., BROWN p. 103 Tr. N. Zeal. Inst. 43.

Polydacrys seriegranosus p. 218 pl. ix f. 18 *micronatus* f. 19, *nigrofasciatus* f. 20, p. 219, *brevicollis* p. 220, spp. n., Centr. America, *depressifrons* Boh. f. 17, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Polydrosodes gen. n. p. 214, *conicus* sp. n. Mexico p. 215 pl. ix f. 13, CHAMPION T.c.

Polydrosus curtulus sp. n. Italien, SCHILSKY Küster u. Kraatz 47 Nr. 34.—*P. fuscofasciatus* pl. ix f. 1, *flavonotatus* f. 2, *longicornis* f. 3, p. 210, *mutabilis* figs. 4 & 5, *partitus* f. 6, p. 311, *immaculatus* f. 7, *macrocephalus* f. 8, p. 212, *amplipectennis* f. 9, *chlorogaster* f. 10, *acuminatus* f. 11, p. 213, *pallidisetis* f. 12 p. 214, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Porocterus alboscuteellaris p. 119, *melancholicus* p. 120, *undulatus* p. 121, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.

Prepodellus viridisquamis sp. n. Nicaragua p. 220 pl. ix figs. 21 & 22, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Promecops unidentata p. 313 pl. xiv f. 22, *dentimanus* p. 314 f. 25, *tridentata* f. 26, *clavisetis* f. 27, p. 315, *alternans* f. 28, *brevisetis* f. 29, p. 316, *uniformis* f. 30 p. 317, spp. n., Centr. America, *viator* Fähr. f. 21, *leucothyrea* figs. 23 & 24, CHAMPION T.c.

Prosauleus sublineatus Australia sp. n., LEA p. 62 Trans. R. Soc. S. Austral. 35.

Prypnus angustus p. 61, *tibialis*, *glaber*, p. 62, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.—*P. scutellaris murinus* var. n. Australia, LEA p. 63 Trans. R. Soc. S. Austral. 35.

Pseudeustylus gen. n. p. 296, *cupreo-viridis* pl. xiii f. 29, *cupreotinctus* f. 30, p. 297, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Pseudhypoptus gen. n. type *Lordops parvus* Fähr. p. 304 pl. xiv f. 9, *eurylobus* sp. n. Mexico p. 305 f. 10, CHAMPION T.c.

Pseudocyphus geminus pl. xiii f. 8, *nigroguttatus* figs. 9 & 10, p. 284, *macroscapus* p. 285 f. 11, *zebra* f. 12, *chrysopus* f. 13, p. 286, spp. n., Centr. America. CHAMPION T.c.

Pseudometyrus gen. n. near *Metyrus* p. 115. *laminatus* sp. n. Australia p. 116, LEA Mem. Soc. ent. Belgique 18.

Pseudopantomorus gen. n. *latifrons* sp. n. Panama pl. xv f. 25 p. 338, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Pythis gen. n. near *Sciadrusus*, *amplicollis* sp. n. Mexico, pl. xv f. 28 p. 340, CHAMPION T.c.

Rhadinoscaphus gen. n. *Oosominae*, *nociturus* sp. n. O-Afr., KOLBE p. 506 Deutsch. ent. Zeitschr. 1911.

Rhinaria elegans sp. n. Austral., LEA p. 189 Mitt. Mus. Berlin 5.

Rhinospathe v-album sp. n. Guatemala p. 249 pl. xi f. 2, *albomarginata* Chev. f. 1, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Rhynchaenus furcipubens Transkaspien, *furculatus* Buchara, *austriacus* Mödling bei Wien, *persimilis* Südf. frankreich, *subcinereus* Russisch-Armenien, *subfarinus* Syrien, spp. n., REITTER Entom. Ztg Wien 30 p. 278.

Rhynchites harwoodi sp. n. England, JOY p. 271 Ent. Mag. 47.—*R. aereipectennis* ♂, *R. cyaneus* sp. n. Mostar, p. 207, *R. (Coenorhynchus) tabelle* p. 207, FORMÁNEK Wien ent. Ztg 30.

Rhynchitina siciliani, tavola, VITALE Riv. coleotter. ital. 9 pp. 207-212.

Rhytirhinus perplexus p. 132, *oberthueri* p. 122, *turcicus* p. 133 & 151, *uncatus* p. 134, *lobothorax* pp. 134 & 149, *compressipennis* pp. 134 & 144, *lamellicostis* pp. 134 & 145, *nevadensis* pp. 135 & 147, *moroderi*, *rudolfi*, p. 139, *niloticus*, *zebra*, *claviscapus*, p. 140, spp. n., *compressicornis integricollis* p. 144 & *corrosicollis* p. 145, var. n., *incisus* p. 146, *tibiellus* p. 153, *brucki* p. 160, *dissimilis* p. 176, spp. n., DESBROCHERS Frelon 17.

Sciadrusus gen. n. *Otiiorhynchinae* p. 171, *propheticus* sp. n. Mexico p. 172 pl. vii f. 9, SHARP Biol. Centr.-Amer. Col. 4 pt. 3.

Sciomias gen. n. *Otiiorhynchinae*, *elegans* pl. vii f. 10, p. 172, *subtilis*

f. 11, Mexico, *rugicollis*, p. 173, *latipennis* p. 174 pl. vii f. 12, Guatemala, spp. n., SHARP T.C.

Sclerorrhinus inconstans sp. n. N. S. Wales, LEA p. 77 Mem. Soc. ent. Belgique 18.

†*Scyphophorus tertiaris* sp. n. Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 68.

Sediantha gen. n. near *Desiantha*, *maritima* sp. n. Australia, LEA p. 101 Mem. soc. ent. Belgique 18.

Sibinia ventralis sp. n. Dalmatien etc., SCHILSKY Küster u. Kraatz 47 Nr. 72.

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Sphenophorus maidis, KELLY U. S. Dept. Agric. Bur. Ent. Washington Bull. No. 95 pp. 11–22 pls. ii & iii.—*S. (Rhabdocnemis) obscurus* pp. 35–40 ff. 4 & 5, VAN DINE U. S. Dept. Agric. Ent. Washington Bull. 93.

Steirarrhinus gen. n. *Cyphini* p. 222, *conicollis* p. 223 pl. ix figs. 23 & 24, *infuscatus* f. 25, *nebulosus* figs. 26–28, p. 224, *serripes* p. 225 f. 30, *guatemaltecus*, *tenuicornis* f. 31, *cupreotinctus* f. 32, p. 226, *lineatocollis*, *bicinctus* f. 33, p. 227, *cinereoguttatus* f. 34, *cinctipennis* f. 35, p. 228, spp. n., Centr. America, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Stephanocleonus kozlovi Mongolia centralis p. 430, *grumi* Vorgebirge des Altai p. 431, *gobianus* Gobi p. 432, spp. n., SUVOROV Rev. russ. ent. 11.

Storeus pulchricollis sp. n. N. S. Wales, LEA p. 102 Mem. Soc. ent. Belgique 18.

Talaurinus m-elevatus p. 79, *melancholicus* p. 80, *maculipennis* p. 81, *simplicipes* p. 82, *cavirostris* p. 83, spp. n., Australia, LEA Mem. Soc. ent. Belgique 18.—*T. dameli* = (*cariosus* Pasc.), LEA p. 75 Tr. R. Soc. S. Austral. 35.

Tanymecus hirsutus sp. n. Mexico p. 179 pl. vii f. 21, *confertus* Gyll. f. 20, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Tetragononmus gen. n. *Cyphini*, *tuberosus* sp. n. Panama pl. x f. 21, CHAMPION p. 240 T.C.

✗ *Thamiras* gen. n. near *Trachyphloeus*, *undulatus* sp. n. Guatemala pl. xv f. 32, p. 343, CHAMPION T.C.

Thechia alternata, *cinerascens*, Australia, spp. n., LEA p. 84 Trans. R. Soc. S. Austral. 35.

✗ *Thotmus* gen. n. *Otiiorhynch.* p. 102, *halli* sp. n. p. 103, Pitt Island, BROWN Tr. N. Zeal. Inst. 43.

Tricholepis inornata pl. vii f. 18, SHARP p. 177 Biol. Centr.-Amer. Col. 4 pt. 3.

Timareta granicollis sp. n. Austral., LEA p. 177 Mitt. Mus. Berlin 5.

Titinia microps sp. n. Queensland, LEA p. 66 Mem. Soc. ent. Belgique 18.

Tosastes coarctatus sp. n. Mexico p. 319 pl. xv f. 4, CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

†*Toxorhynchus grandis* sp. n. Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 63.

✗ *Trachyphloeomimus* gen. n., *spurcus* sp. n. Mexico pl. xv f. 31, p. 342, and *Trachyphloeus solitarius* Sh., CHAMPION Biol. Centr.-Amer. Col. 4 pt. 3.

Trachyphloeus solitarius sp. n. Mexico p. 177 pl. vii f. 19, SHARP Biol. Centr.-Amer. Col. 4 pt. 3.—*T. fleischeri* sp. n. Rumänien, FORMÁNEK Wien Ent. Ztg 30 p. 204.

Tyloderma joveolatum, habits, GIRAULT Ent. News 22 p. 112.

Tyrtaeosus interstitialis sp. n. Austral. LEA p. 198 Mitt. Mus. Berlin 5.

✗ *Xenacalles* gen. n., *squamiventris* sp. n. Pitt Island, BROWN p. 198 Tr. N. Zeal. Inst. 43.

Xenocnema spinipes australiae var. n., LEA p. 88 Trans. R. Soc. S. Austral. 35.

SCOLYTIDAE OR IPIDAE.

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Acacicis gen. n. near *Ficicis*, abundans sp. n. Tasmania and Victoria, p. 149, LEA Proc. R. Soc. Vict. 22.

Cladoctonus gen. n. near *Hylburgus*, *affinis* sp. n. Abyssynia, STROHMEYER p. 17 Ent. Bl. 7.—*C. eggersi* sp. n. Aethiopia, WICHMANN Wien Ent. Ztg 30 p. 174.

Cnestus gen. n., *magnus* sp. n. Ceylon, SAMPSON p. 383 Ann. Nat. Hist. 8.

Crossotarsus bidentatus p. 222 O-Afr., *alternans*, *abbreviatus*, p. 224, Kamerun, *spinidens* p. 225 Kongo, *serratus* p. 226, *conradti* p. 227, *brevis* p. 228. Kamerun, spp. n., STROHMEYER Ent. Bl. Berlin 7.

Cryphalus stierlini sp. n. Italia p. 121, *piceae* var. n. *orientalis* Herzegowina p. 123, EGGERS Ent. Bl. Berlin 7.—*C. squamulosus* sp. n. p. 20 f. 3 Philippine Is., STROHMEYER Philippine J. Sci. D. 6.

Crypturgus cinereus Brutanlage, KLEINE Ent. Bl. 7 p. 158.—*C. atticus* sp. n. p. 120, *numidicus* var. n. *abbreviatus* Balkan p. 133, EGGERS Ent. Bl. Berlin 7.

Cylindropalpus gen. n., *africanus* sp. n. Kamerun, STROHMEYER p. 174 D. ent. Nationalbibl. 2.

Cyrtogenius major sp. n. Abyssynia, STROHMEYER p. 16 Ent. Bl. 7.

Dryocoetes similis sp. n. Corsica, EGGERS p. 121 Ent. Bl. Berlin 7.

Ecoptogaster anatolicus Asia minor, *balkanicus* Bosnia, spp. n., EGGERS pp. 74-75 T.c.—*E. (Scolytus) siculus* Sicilia p. 193, *leonii* Italia p. 194, spp. n., EGGERS Naturalista sicil. 20.

Eccoptopterus limbus sp. n. Perak, SAMPSON p. 381 Ann. Nat. Hist. 8.

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Ficicis gen. n. near *Hylesinus*, *varians* p. 147, *koebelei* Queensland

p. 148, spp. n., LEA Proc. R. Soc. Vict. 22.

Hylastes gergeri sp. n. Ungarn, EGGERS p. 119 Ent. Bl. Berlin 7.—*H. fallax* sp. n. Vallombrosa, WICHMANN Entom. Ztg Wien 30 p. 100.—*H. tiliae*, Biologie im Kaukasus (Russ.), VINOGRADOV-NIKITIN Lěsn. žurn. 41 pp. 1472-1477.

Hylesinosoma gen. n. p. 143 near *Phloeotribus*, for *Hylesinus fici*, LEA Proc. R. Soc. Vict. 22.

Hylesinus cordipennis, *interstitialis*, spp. n., Queensland, LEA p. 144 T.c.

Hypothenemus kraussei sp. n. Sardinien, WICHMANN-ROSENHOF Wien Ent. Ztg 30 p. 210.

Ips borealis p. 213, *longidens* p. 214, spp. n., N. America, SWAINE Canad. Ent. 43.

Mitosoma chapuisi sp. n. Madagaskar, STROHMEYER p. 233 Ent. Bl. Berlin 7.

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Neotomicus subg. n. zu *Ips*, FUCHS p. 33 Hab.-Schr. techn. Hochsch. Karlsruhe.

Notoplatypus gen. n. p. 135, *elongatus* sp. n. N. S. Wales, LEA p. 136 Proc. R. Soc. Vict. 22.

Ozopemon laevis p. 22 ff. 4-6, *major* p. 23, spp. n., Philippine Is., STROHMEYER Philippine J. Sci. D. 6.

Phloeophthorus and *Phloeotribus* p. 221, *Phloeotribus piceae* sp. n. Canada p. 220, SWAINE Canad. Ent. 43.

Phloeotribus oleae, TOPI Rend. Acc. Lincei 20 1. sem. pp. 52-57.

Pityogenes monacensis sp. n. p. 3 Bayern, *bidentatus* var. n. *carniolica* p. 14 Kärnten, FUCHS Hab.-Schr. techn. Hochsch. Karlsruhe.

Pityokteines subg. n. zu *Ips*, FUCHS p. 33 T.c.

Platypus vastus Kamerun, *punctatus*, p. 229, *ater* p. 230, Madagaskar, *bilobatus* p. 234 Peru, spp. n., STROHMEYER Ent. Bl. Berlin 7.—*P. wilmoti* sp. n.

India, STEBBING p. 36 Ind. Forest. Mem. 2.—*P. schultzei* sp. n. p. 26 f. 7 Philippine Is., STROHMEYER Philippine J. Sci. D. 6.

Polygraphus subopacus ab. n. *xaverti* Vorarlberg, REITTER Entom. Ztg Wien 30 pp. 47–55.—*P. grandiclava*, MÜHL Ent. Bl. 7 p. 66.

Pseudopolygraphus gen. n., *cembrae* sp. n. Dachstein, SEITNER ZentrBl. Forstwes. Wien 37 pp. 99–109.—*P.*, Bemerkungen, BAER p. 506 Zentrbl. Forstwes. 37.

Scolytus rugulosus, life history, pp. 36–37 ff. 13 & 14, SMITH Agric. Exp. Sta. New Jersey Bull. No. 235.

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Trypodendron betulae sp. n. Quebec, SWAINE p. 216 Canad. Entom. 43.

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BRENTHIDAE.

Diurus ambiguus p. 37, *articulatus* p. 38, *intermedius* p. 41, *poultoni* p. 44, Borneo, *philippinus* Is. Philippinae p. 45, *filicauda* Borneo p. 47, spp. n., SENNA Boll. Soc. ent. Ital. 41.

Eterodiurus gen. n. p. 51, *singularis* sp. n. p. 52, India ? Polynesia ?, SENNA T.c.

Pseudotaphroderes gen. n. allied to *Taphroderes*, *forficatus* New-Guinea, *formosanus* Formosa, *papuanus* New-Guinea, spp. n., BOLKAY Ann. Mus. Hung. 9 pp. 263–265 figs.

ANTHRIBIDAE.

Acorynus flavipunctum Borneo, *homospilus* Malacca, p. 95, *caenorus* Perak p. 96 with subsp. *gitonus* and *cadarus*, *mesotaenia* Sumatra, *brevis* Malacca, p. 97, *scalaris*, *xanthurus*, p. 98, *distichus* p. 99, *nessiarops* p. 100, Borneo, *pachys* with subsp. *viticollis* p. 101, *pais*, *caffer*, p. 102, Africa, spp. n., *luzonicus leitensis* and *l. rantus*, subspp. n., p. 99, JORDAN Nov. Zool. 18.

Anthrribus cristatulus p. 111, *propinquus*, *pilicornis*, p. 112, Pitt Island, spp. n., BROUN Tr. N. Zeal. Inst. 43.

Cedocus gen. n. near *Cedus*, *lynceus*. Sumatra, p. 110, *diversus* India p. 111, spp. n., JORDAN Nov. Zool. 18.

†*Cratoparis adumbratus* sp. n. Colorado Miocene, WICKHAM Bull. Amer. Mus. 30 p. 69.

Gynandrocerus thomensis sp. n. Africa, JORDAN p. 90 Nov. Zool. 18.

Hucus virgatus New Guinea, *proles* Batjan, spp. n., JORDAN p. 107 T.c.

Hypselotrophis grandis sp. n. Amazons, JORDAN p. 92 T.c.

Lemuricedus gen. n. p. 107 type *audouini* Fahr., *acoenus* p. 108, *cervinus*, *dexius*, p. 109, spp. n., Madagascar, JORDAN T.c.

Litocerus helictus W. Africa p. 102, *callias* Malacca p. 103, *ypsilon* p. 104, *raja* p. 105, Borneo, spp. n., *macroptalmus celebensis* subsp. n., p. 106, JORDAN T.c.

Mecocerina lewisi p. 111, *rhanis* p. 112, Sarawak, *diffusa* Johore p. 113, spp. n., *guttata ochropus* and *suavis* subsp. n. p. 114, JORDAN T.c.

Mecotropis duplicatus, *annulipes*, Sarawak, p. 93, *icanus* Malacca p. 94, spp. n., JORDAN T.c.

Merarius glabriceps sp. n. Sikkim, JORDAN p. 106 T.c.

Mucronianus lepidus sp. n. Perak, JORDAN p. 114 T.c.

Phloeobius hypoxanthus sp. n. St. Thomé, JORDAN p. 91 T.c.

Phloeotragus atlas sp. n. Congo, JORDAN p. 92 T.c.

Sympaector pagis sp. n. Java p. 115, with subsp. *ligyrus* p. 116, JORDAN T.c.

Xenocerus calimus sp. n. Andamans, JORDAN p. 94 T.c.

Xylinades thomasi sp. n. St. Thomé, JORDAN p. 90 T.c.

CERAMBYCIDAE.

Revision of *Prionidae*, pts. xviii & xix, LAMBEERE Ann. Soc. ent. Belgique 55 pp. 260–277 & 325–356.

Acmocera albofasciata sp. n. Ituri, HINTZ p. 440 Wiss. Ergebn. Z. Afrika Exp. 3.

Acorethra aureo-fasciata sp. n., GOUNELLE p. 62 Ann. Soc. ent. France 80.

Acyphoderes carinicolis nigricans var. n., GOUNELLE p. 48 T.C.

Aesopida ? *fasciculata* sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 17.

Aethiopia gen. n. *Pteroptinae* p. 33, *elongata* p. 34, sp. n. Abyssinien, AURIVILLIUS T.C.

Alphitopola kristenseni p. 17, *haemorrhoidalis*, *balteata* p. 18, spp. n., Abyssinien, AURIVILLIUS T.C.

Anancylus maculosus sp. n. Deutsch Neu Guinea, AURIVILLIUS T.C.

Ancylocera militaris sp. n. p. 116, fig., *foveicollis nigricornis*, p. 117, *terminata nigricollis*, p. 116, var. n., GOUNELLE Ann. Soc. ent. France 80.

Antenoeme gen. n. *Oeminarum*, *quadriplagiata* sp. n. Congo belge, HINTZ p. 427 Wiss. Ergebn. Z. Afrika Exp. 3.

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Callichroma equestre p. 68, *neglectum* p. 70 fig. p. 71, *bouvieri* p. 72, spp. n., *equestre subnitescens* p. 69, *aterrimus* p. 70, *vittatum* Fabr., *electrinum*, p. 74, var. n., GOUNELLE Ann. Soc. ent. France 80.—*C. distinguendum* p. 165, *chloë* p. 167, *uniforme* p. 169, spp. n., Brazil, GOUNELLE T.C.—*C. schubotzi* sp. n. Huri, HINTZ p. 430 Wiss. Ergebn. Z. Afrika Exp. 3.

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Ceroplesis reticulata Abyssinien, *restitutae* Deutsch Ost-afrika, spp. n., AURIVILLIUS Ark. Zool. 7 No. 19 p. 20.

Charisia melanaria p. 57, *debilis* p. 59, spp. n., *aglaia rufo-femorata* var. n., GOUNELLE p. 60 Ann. Soc. ent. France 80.

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Compsodorcadion jakovlevianum sp. n. *zaisanense* subsp. n. See Zaisan, *akmolense* Akmolinsk p. 63, *balchashense* Balchash p. 64, *eurygyne* Semipalatinsk

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Cosmoplatidius subg. n. gen. *Cosmoplatys* p. 131, type *mandibularis* sp. n. p. 132, GOUNELLE T.c.

Cosmosoma compsoceriodes p. 103, *cyaneum* p. 105 fig., *persimile* p. 107 fig., spp. n., GOUNELLE T.c.

Cyclocerus gen. n. *Acanthoderitae*, *ferranti* sp. n. Congo, HINTZ pp. 441–442 Wiss. Ergebn. Z. Afrika Exp. 3.

Cynoderus rufithorax sp. n., *chlorizans concolor semirufus* varr. n., p. 100, GOUNELLE Ann. Soc. ent. France 80.

Cylindrostyrax gen. n. *Niponinae*, *apomecynoides* sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 26 fig. 54.

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Dorcadion ignotum p. 80, *palentinum* p. 81, *segurense* p. 82, spp. n., Spain, *umbripenne* varr. n., *lorquini* var. n., p. 82, synonymy pp. 84 & 85, ESCALERA Bol. Soc. españ. 11.—*D. arandae* sp. n. Spain p. 306, *albicans* ab. n. *aestivum* p. 307, SCHRAMM Bol. Soc. españ. 11.—

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Eunidia bifasciata Britisch Ostafrika, *brunneopunctata* Deutsch Südwestafrika, *tibialis* Britisch Ostafrika p. 28, *subturalis* Kilimandjaro, *kristenseni* Abyssinien p. 29, *alternata* Britisch Ostafrika, *lineata* Abyssinien p. 30, *quadrifasciata* Britisch Ostafrika, *fulgurata* Abyssinien p. 31, *haplotrita* Abyssinien, *tripunctata* Angola p. 32, spp. n., AURIVILLIUS Ark. Zool. 7 No. 19.

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Eutaenia borneensis sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 12.

Fregolia gen. n. voisin de *Listroptera* p. 90, *Listropteroides* sp. n. fig., GOUNELLE Ann. Soc. ent. France 80.

Glenea atriceps, *disa*, *trivittata*, p. 36, *matangensis* p. 37 fig. 75, Borneo, *mona*, *wiedenfeldi*, *orichalcea* p. 38 Deutsch Neu Guinea, spp. n., AURIVILLIUS Ark. Zool. 7 No. 19.—*G. 6-vittata* Beni, *congolensis* Congo, *ducalis Ituri*, *albopunctata*, *24-maculata*, Ruwenzori, spp. n., HINTZ pp. 442–443 Wiss. Ergebn. Z. Afrika Exp. 3.

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Guitelia gen. n. p. 183 voisin de *Nothopeus*, *vuilleti* sp. n. p. 184 fig., OBERTHÜR Insecta 1.

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Hepomidion dentatum sp. n. Ruanda, HINTZ p. 434 Wiss. Ergebn. Z. Afrika Exp. 3.

Homonaecomorpha gen. n. nahe *Heteroclytomorpha*, *flavovariegata* sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 23.

Hyborhabdus gen. n. *Hyborhabdinae* subfam. n. p. 22, *singularis* p. 23 sp. n. Borneo, AURIVILLIUS T.c.

Ischasia valida p. 53, *crassitarsis* p. 54 fig. p. 55, *ligulatipennis* p. 56 fig., spp. n., GOUNELLE Ann. Soc. ent. France 80.

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Mallosia, PIC Bull. Soc. ent. France p. 107.

Mecometopus ictericus p. 85, *delicatus* p. 86 fig. p. 87, spp. n., GOUNELLE Ann. Soc. ent. France 80.

Merionoedopsis gen. n. p. 11 voisin de *Merionoeda*, *aeneiventris* sp. n. Brazil p. 13, GOUNELLE T.c.

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Mimohammus gen. n. nahe *Mono-chamus* p. 12, *flavescens* sp. n. p. 13 Borneo, AURIVILLIUS Ark. Zool. 7 No. 19.

Moecha rubrocincta sp. n. Kiwu-See, HINTZ p. 437 Wiss. Ergebn. Z. Afrika Exp. 3.

Moechopsis gen. n. near *Moecha*, *ruficornis* sp. n. Tanganyika, HINTZ p. 438 T.c.

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Oberea dehiscens, *bivittata*, spp. n. Borneo, AURIVILLIUS p. 40 T.c.

Odontocera pusilla p. 38, *virgata* p. 39, *soror* p. 41, *trisignata* p. 43 fig., *sulfuricauda* p. 44, *flavo-calceata* p. 46, spp. n., *flavicauda* Bates notatisternis var. n. p. 40, GOUNELLE Ann. Soc. ent. France 80.

Ommata (*Phoenissa*) *nitidiventris* p. 21, *O. (Chrysaethe) amoena* p. 22, *picturata*, *croceicornis* p. 25, *fejuna* p. 26, *nais* p. 28, *namulicola* p. 29, *perplexa* p. 30, *O. (Eclipta) eunomia nigrilatera* var. n. p. 24, *notaticollis* p. 31, *seminigra* p. 32, *discolor* p. 34, *semiflammea* p. 35, *viridis* p. 36, spp. n., GOUNELLE T.c.

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Ophiostomis irene p. 1, *rubiginosa* p. 3, spp. n., GOUNELLE Ann. Soc. ent. France 80.

Ornistomus armatus sp. n. p. 18, *bicinctus* Thoms. *pallidulus* var. n. p. 20 figs. 1-2, GOUNELLE T.c.

Orthoschema concolor p. 75, *prasini-ventre* p. 76, spp. n., GOUNELLE T.c.

Otaromia gen. n. near *Aphrodisium* typ. *Aromia lugubris* Fairm., AURIVILLIUS Ark. Zool. 7 No. 19 p. 2.

Oxymerus punctatus sp. n., GOUNELLE p. 138 Ann. Soc. ent. France 80.

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Pachydissus sartus Entwicklung, Puppenwiegen (Russ.), PLOTNIKOV Turkest. selisk. choz. 6 p. 823.—*P. congolensis* sp. n. Congo belge, HINTZ p. 428 Wiss. Ergebn. Z. Afrika Exp. 3.

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Pharsalia nigrofasciata sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 14.

Phryneta immaculata sp. n. Ruwenzori, HINTZ p. 439 Wiss. Ergebn. Z. Afrika Exp. 3.

Phygopoda fulvitarsis p. 61, *nigritarsis* p. 62, spp. n., GOUNELLE Ann. Soc. ent. France 80.

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Plagionotulus sylvaticus sp. n. Beni, HINTZ p. 432 Wiss. Ergebn. Z. Afrika Exp. 3.

Planodes variegatus p. 14, *bifasciatus* p. 15, spp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19.

Platyarthron nanum sp. n., GOUNELLE p. 124 Ann. Soc. ent. France 80.

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Pterolophia anoplagiata sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 23.

Purpuricenus subnotatus, *innotatus*, *carinifer*, spp. n., p. 24, PIC Mat. Long. 7 2.

Rhagium bifasciatum medio-fasciatum var. nov. p. 20, PIC Mat. Long. 7 2.

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Sodus castaneus sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 25 fig. 53.

Somatidia waiti p. 113, *vicina* p. 114, Pitt Island, spp. n. BROWN Tr. N. Zeal. Inst. 43.

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Strangalia virescens sp. n. Borneo, AURIVILLIUS Ark. Zool. 7 No. 19 p. 2.

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sinensis China p. 249, **spp. n.**, *camer-
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249, COCKERELL Proc. U. S. Nation.
Mus. 40.—*A. chubuti* **sp. n.** Patagonia

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Soc. 36.—*A. latum*, ♂, SCHROTTKY p.
232 An. Soc. Argent. 65.

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dula* **sp. n.** Central-Africa, STRAND p.
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Exp. 3.—*A. aethiopica*, *armatipes*,
rufiventris, O-Africa, bothai Orangestaat,
herbsti, *hirtiventris*, *labrosa*, *peringueyi*,
superba, Kapland, *leucopyga* Mashona-
land, *armatilabris*, *felina*, *laticeps*, Kap-
land, **spp. n.**, p. 674-675, FRIESE Zool.
Jahrb. Syst. 30.—*A. tellervo* **sp. n.**
Kamerun, STRAND p. 500 Mitt. Mus.
Berlin 5.—*A. mephistophelicana*, *pseu-
dobasalis*, **spp. n.**, S.-Africa, STRAND pp.
119-120 Ent. Rdsch. 28.—*A. delicata*
p. 235, *amolita* p. 237, **spp. n.**, India,
camelorum n. n. for *ruficornis* Fedtsch.
p. 236, and 3 varr. n., *niveocincta* Sm.
p. 236, COCKERELL Entomologist 34.—
A. korotonensis, *calceifera*, Formosa,
p. 492, *caldwelli* China p. 493, *comberi*
India p. 494, **spp. n.**, COCKERELL Ann.
Nat. Hist. 7.—*A. urens* **sp. n.** Formosa,
COCKERELL p. 341 Entomologist 44.—
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FRIESE Verh. ZB. Ges. 61 pp. 123-128.
—*A. flava*, *rufescens* Austral., *aurata*
Neu-Guinea, **spp. n.**, FRIESE p. 448-450
Deutsche ent. Zs. 1911.—*A. zonata*
buruensis subsp. n. Buru p. 260, *eversa*
p. 260, *robby*, *retusiformis*, p. 262,
melanognatha p. 263, China, *hilgendorfi*,
venerabilis, p. 261, Japan, **spp. n.**,
COCKERELL Proc. U. S. Nation. Mus.
40.—*A. sapiens* **sp. n.** Solomon Islands,
COCKERELL P. Linn. Soc. N.S.W. 36
p. 166.—*A. andicola* **sp. n.** Peru,
SCHROTTKY p. 38 Ent. Rdsch. 28.—*A. cir-
rhosa* **sp. n.** Chile p. 56, PÉREZ Rev.
Mus. Chilena 15.—*A. khambana atra-
mentata* var. n., COCKERELL p. 177
Entomologist 44.—*A. bomboideis willingi*
subsp. n., COCKERELL p. 34 Canad. Ent.
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Formosa, COCKERELL T.c.—*H. nikkoensis* sp. n. Japan p. 241, COCKERELL Proc. U. S. Nation. Mus. 40.—*H. paracolletinus* sp. n. Queensland p. 201, COCKERELL Trans. Amer. Ent. Soc. 36.—*H. rowlandi, eyrei*, p. 226, *tatei* p. 227, *ewarti* p. 230, *blackburni, stirlingi*, p. 232, *maillandi* p. 233, *davidis* p. 234, *behri* p. 228, *woodsii* p. 229, *hedleyi* p. 231, Australia, *H. papuarum* New Guinea p. 235, *cambagei* South Australia p. 236, *leai* Victoria p. 237, spp. n., COCKERELL T.c.—*H. froggatti, viridiscitus, exterus*, spp. n., Solomon Islands, COCKERELL P. Linn. Soc. N.S.W. 36 pp. 162–164.—*H. sansoni* sp. n. Alberta p. 267, CRAWFORD Proc. U. S. Nation. Mus. 41.—*H. nigroviridis* sp. n. p. 233 Wisconsin, GRAENICHER Milwaukee Bull. Pub. Mus. 1.—*H. nahuelhuapiensis, bruchianus*, spp. n., Argentina, SCHROTTKY An. Soc. Argentina 65 1908.

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Cardiocondyla montandoni sp. n. Roumania, SANTSCHI p. 657 Bul. Soc. Bucharest 20.—*C. elegans* var. n. *leonorae* p. 337, FOREL Bull. Soc. Lausanne 47.—*C. emeryi mahdii* subsp. n. Khartum, KARAWAIEW Rev. russ. ent. 11 p. 8.

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fictrix p. 27, *borneensis insula, harpyia*, p. 33, Sarawak, varr. n., *egidyi spinozai* p. 25, *borneensis symbia* p. 34, *novem, hosei*, p. 35, *capax* p. 37, Sarawak, subssp. n., FOREL Rev. Suisse Zool. 19.—*C. biroi quadriruga* Siam var. n., FOREL p. 455 Rev. Suisse Zool. 19.—*C. rogenhoferi* var. n. *fabricans, jacobsoni* sp. n. Java, FOREL p. 201 Notes Mus. Leiden 33.—*C. meyeri* p. 534, *mesonotalis* p. 535, spp. n., New Guinea, EMERY Nova Guinea 5.—*C. weberi* sp. n. New Guinea, EMERY Nova Guinea 9 p. 254.—*C. laevis* var. n. *bruesti* p. 169, Grenada, W.I., WHEELER Bull. Mus. Harvard 54.—*C. montezumia* var. n. *functa, goeldii* var. n. *stigmatica, distans* var. n. *rugiceps*, Brasil, FOREL pp. 300–301 Deutsche ent. Zs. 1911.

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subsp. n. *schereri* Liberia, FOREL p. 254 SB. Ak. München 41.—*D. kohli minor* Benguela var. n., SANTSCHI p. 206 Rev. Zool. afric. 1.—*A. emeryi opacus*, ♂, FOREL p. 452 Rev. suisse zool. 19.

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Iridomyrmex cordatus protensus subsp. n. Sarawak p. 47, *cordatus fuscus waldoi* Siam, *jactans* Singapore, p. 48, varr. n., FOREL Rev. Suisse Zool. 19.—*I. cordatus waldoi* Siam var. n., FOREL p. 285 Rev. Zool. afric. 1.—*I. murinus* sp. n. New Guinea, EMERY Nova Guinea 5 p. 536.—*I. nitidus* var. n. *victorianus* Austral. p. 368, *I. angustus, sellatus*, spp. n., Neu Guinea, p. 369,

STITZ S. B. Ges. naturf. Fr. Berlin 1911.—*I. scrutator* subsp. n. *batesi* Neu Guinea, FOREL p. 283 SB. Ak. München 41.

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Leptothorax (*Temnothorax*) *antigoni* Smyrne n. sp. p. 333, *exilis* var. *darii* n. var. Smyrne p. 334, *bulgaricus* s. sp. *aeolius* p. 334, s. sp. *smyrnensis* p. 335, s. sp. *graeus* p. 336, s. spp. n., FOREL Bull. Soc. Lausanne 47.—*L. tenuispinus* sp. n. Tunis, SANTSCHI p. 285 Ann. Soc. ent. Belgique 55.—*L. pallidipes* p. 61, *naeviventris* p. 62, spp. n., Tunis, SANTSCHI Bull. Soc. Alger. 1.—*L. interruptus*, BONDROIT p. 12 Ann. Soc. ent. Belgique 55.

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SB. Ak. München 41; habits, BOUVIER pp. 237–248 Congr. Internat. Ent. 1; retour an nid, CORNETZ Bull. Soc. Lausanne 47 pp. xx–xxiii.—*M. oertzeni* var. n. *amphigena* p. 347, FOREL Bull. Soc. Lausanne 47.

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Myrmecocystus (*Cataglyphis*) *viaticus* var. n. *rufiventris* p. 353, FOREL Bull. Soc. Lausanne 47.—*M. bombycinus* var. n. *bruniceps*, SANTSCHI p. 287 Ann. Soc. ent. Belgique 55.—*M. cursor* subsp. n. *rockingeri* Tian Schan, FOREL p. 287 SB. Ak. München 41.

Myrmica rubra subsp. *kotokui* Japan, FOREL p. 268 SB. Ak. München 41; subsp. *champlaini europaea* var. n., Norvège, FOREL p. 457 Rev. Suisse Zool. 19.—*M. schencki* ♂, *lobicornis* var. n. *arduennae*, BONDROIT p. 11 Ann. Soc. ent. Belgique 55.

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Ocymyrmex weitzeckeri fortior, *transversus*, Benguela varr. n., SANTSCHI p. 209 Rev. Zool. afric. 1.

Odontomachus intermedius sp. n. Bukoba STITZ p. 378 Wiss. Ergebn. Z. Afrika Exp. 3.—*O. angulatus* subsp. n. *praefectus*, *O. cephalotes* var. n. *ternatensis* Neu Guinea, FOREL p. 251 SB. Ak. München 41.—*O. gulosus* var. n. *nubila*, *ruficeps*, *cruenta* and *fusca*, varr. n., *ruficeps* var. *obtusa*, pp. 250–251, *imperator rufithorax* subsp. n., *aeneus* sp. n., New Guinea, p. 534, EMERY Nova Guinea 5.—*O. ruficeps* var. n. *yorkensis* Austral., STITZ p. 356 S. B. Ges. naturf. Fr. Berlin 1911.

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Oligomyrmex oertzeni Forel var. n. *aeolie* p. 338, FOREL Bull. Soc. Lausanne 47.—*O. jacobsoni* sp. n. Semarang, FOREL Notes Mus. Leiden 33 p. 199.

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stricta var. n. *bruesi* p. 169 Grenada, W.I., WHEELER Bull. Mus. Harvard 54.—*P. tisiphone* sp. n. Mexico p. 203, WHEELER Psyche 18.—*P. caribbaea* p. 23, *P. (Ceratopheidole) hecate* p. 26, spp. n. *hecate malevola* subsp. n. p. 27, Jamaica, WHEELER Bull. Amer. Mus. 30.—*P. guilelmi mülleri* var. n. *gustavi*, *injuncta*, *P. fallax* subsp. n. *puttemansi*, *P. radoszkowskii* var. n. *saviozae* Brasil, FOREL pp. 302–304 D. ent. Zs. Berlin 1911.—*P. riveti* sp. n. Ecuador, SANTSCHI p. 278 Ann. Soc. ent. Belgique 55.

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Plagiolepis tenella Congo sp. n., SANTSCHI p. 210 Rev. Zool. afric. 1.—*P. tenella* sp. n., SANTSCHI p. 364 Ann. Soc. ent. France 79.—*P. pygmaeaschmitzi* ♂, *pygmaea* var. n. *barbara*, SANTSCHI p. 286 Ann. Soc. ent. Belgique 55.—*P. pygmaea* var. n. *minu* p. 350, FOREL Bull. Soc. Lausanne 47.

Platythyrea clypeata sp. n. p. 378 Pays de Moïs, FOREL T.c.—*P. crucheti* Benguela sp. n., SANTSCHI p. 205 Rev. Zool. afric. 1.

Podomyrma castanea p. 358, *obscura* p. 362, Austral., *cataulacoides* p. 364, spp. n., *P. ruficeps* var. n. *thoracica* p. 360 Neu Guinea, STITZ S. B. Ges. naturf. Fr. Berlin 1911.

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lator, novae-guineae, albobalteatus, p.
214, *caenospilus* p. 215, spp. n., New
Guinea, CAMERON Nova Guinea 9.—
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lineata p. 204, spp. n., New Guinea,
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alis p. 207, spp. n., New Guinea, CAMERON
Nova Guinea 9.

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Paniscus antefurcalis var. n. *clavivertex* S.-Afr., *P. barbarus* Tripolis p. 487, *hottentotus* S.-Afr. p. 488, *felix* p. 489, *interstitinervis* p. 490 O.-Afr., *pallidiluteus* W.-u. O.-Afr. p. 492, *rufoculatus* Tongataba p. 493, *moschianus* Moschi p. 494, *arabs* N.-Afr. p. 495, *mombasicus* O.-Afr., *kalaharicus* S.-Afr. p. 496, *nyassicus* Nyassa-Gebiet p. 497, *togoanus* W.-Afr. p. 498, spp. n., STRAND Mitt. Mus. Berlin 5.—*P. natalensis, nigrocaudis*, spp. n., S. Africa, CAMERON Ann. Transv. Mus. 2 p. 191.

Pedinopelte violaceipennis sp. n. Guiana, CAMERON J. R. Agric. Soc. Demerara 1 p. 160.

Perosis albomarginata sp. n. Ungarn, ULBRICHT p. 150 Arch. Naturges. 77 1.

Pharsalia annulipes sp. n. Guiana, CAMERON p. 185 J. R. Agric. Soc. Demerara 1.

Philopsyche pilosella sp. n. N. S. Wales, CAMERON P. Linn. Soc. N.S.W. 36 p. 337.

Phygadeuon (Aenoplex) argeae Ohio p. 405, *P. (Polytribax) pallescens* Pennsylvania p. 406, **spp. n.**, VIERECK Proc. U. S. Nation. Mus. 39.—*P. (Bathymetis) patulus* **sp. n.** Nebraska p. 193, *P. (Daictes) fukaii* **sp. n.** Japan p. 194, *P. (Mastrus) neodiprioni* **sp. n.** Nebraska, p. 195 VIERECK Proc. U. S. Nation. Mus. 40.

Phytodietus rufipes var. **n. orbitalis** Sibiria, ULBRICHT p. 54 Soc. entom. 26.

Pimpla ulicicida **sp. n.** England, MORLEY p. 162 Entomologist 44.—*P. enslini* **sp. n.** Deutschl., ULBRICHT p. 147 Arch. Naturges. 77 1.—*P. monteiroi*, *microspila*, **spp. n.**, S.-Africa, CAMERON Ent. Rdsch. 27 p. 110.—*P. japonica* **sp. n.** Japan, *maculatur* var. **n. rufiventris** Tunis, ULBRICHT p. 53–57 Soc. entom. 26.—*P. porthetriae*, *disparis*, p. 480, **spp. n.**, Japan, VIERECK Proc. U. S. Nation. Mus. 40.—*P. pomorum* Biologische, MOKRZECKI Zs. wiss. Insektenbiol. 7 p. 63.

Pimplomorphia nigro-ornata **sp. n.** S. Africa, CAMERON Ann. Transv. Mus. 2 p. 184.

Platylabus picturatus Erzgebirge, *meuseli* Kroatien, **spp. n.**, LANGE p. 540 D. ent. Zs. 1911.

Plectocryptus flavopunctatus var. **n. sellatus** Deutschl., ULBRICHT p. 146 Arch. Naturges. 77 1.

Pleuroneurophion rotundistriatus **sp. n.** S. Africa, CAMERON Ann. Transv. Mus. 2 p. 183.

Podogaster rufomaculatus **sp. n.** Guiana, CAMERON p. 182 J. R. Agric. Soc. Demerara 1.

Polemophthorus **n. n.** für *Symphylus* Förster 1871, SCHULZ p. 22 Zool. Ann. 4.

Polyaenus spilonotus p. 166, *fusci-ventris* p. 167, **spp. n.** Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Polycyrtus giacomellii **sp. n.** Argentina, SCHROTTKY Boll. Lab. Portici 5 p. 34.—*P. nigri-ventris*, *melanocephalus*, *albolineatus*, **spp. n.**, Guiana, CAMERON J. R. Agric. Soc. Demerara 1 p. 168.

Pristomeridia (?) *dubia* **sp. n.** Massachusetts, p. 24 ff. 9 & 10, BRUES Psyche 18.

Pristomerus coloradensis **sp. n.** Colorado p. 23 ff. 7 & 8, BRUES T.c.—*P.*

tricarinatus **sp. n.** Guiana, CAMERON p. 184 J. R. Agric. Soc. Demerara 1.

Pseudobanchus **gen. n.**, *nigripennis* Gr., SZÉPLIGETI p. 79 Gen. Ins. 114.

Pyracmon rufipes **sp. n.** Kroatien, LANGE p. 574 D. ent. Zs. 1911.

Rhadinopimpla **n. n.** für *Rhadina* Förster 1868, SCHULZ p. 23 Zool. Ann. 4.

Rodwayia **gen. n.** Joppini ? p. 161, *balteata*, *rufa*, **spp. n.**, Guiana p. 162, CAMERON J. R. Agric. Soc. Demerara 1.

Silavoga **gen. n.** *Ophionini*, *longicornis* **sp. n.** S. Africa, CAMERON Ann. Transv. Mus. 2 p. 190.

Stantonina Ashmead; type *flava*, VIERECK D.C. Proc. Ent. Soc. Washington 13 p. 123.

Stenichneumon ? *watertoni* **sp. n.** Guiana, CAMERON J. R. Agric. Soc. Demerara 1 p. 155.

Stilpnus brevicornis **sp. n.** Kroatien, LANGE p. 543 D. ent. Zs. 1911.

Stirojoppa **gen. n.** p. 160, *violaceipennis* **sp. n.** p. 151, CAMERON J. R. Agric. Soc. Demerara 1.

Stiromesostenus **gen. n.** *Mesosteninorum* p. 228, *xanthostomus* **sp. n.** New Guinea p. 229, CAMERON Nova Guinea 9.

Stilocryptus montanus **sp. n.** Kroatien, LANGE p. 542 D. ent. Zs. 1911.

Talorga **gen. n.** *Mesoleptini* p. 63, *spinipes* **sp. n.** Borneo p. 64, CAMERON Entomologist 44.

Theronia papuana **sp. n.** New Guinea, CAMERON Nova Guinea 9 p. 209.—*T. atalantae*, Parasit von *Pimpla* und *Pteromalus* (Russ.), SEVYREV St. Petersburg 1911 p. 58 Title 2271.

Tranosema bicolor **sp. n.** Hungary, SZÉPLIGETI p. 30 Gen. Ins. 114.

Thyreodon nigrocaeruleus **sp. n.** Guiana, CAMERON J. R. Agric. Soc. Demerara 1 p. 180.

Valoga **gen. n.** *Hemitelini*, *nitidiscutis* **sp. n.** S. Africa, CAMERON Ann. Transv. Mus. 2 p. 178.

Xanthocryptus nigricollis, *spilonotus*, p. 212, *nigricornis tibialis*, p. 213, **spp. n.**, New Guinea, CAMERON Nova Guinea 9.—*X. luteus* **sp. n.** Solomon Islands, CAMERON P. Linn. Soc. N.S.W. 36 p. 364.

Xanthopimpla ornatipennis, *varivittata*, p. 208, *xanthocephala* p. 209, *spp. n.*, New Guinea, CAMERON Nova Guinea 9.

Xiphosoma striatum *sp. n.* Guiana CAMERON p. 181 J. R. Agric. Soc. Demerara 1.

Xorides kissi *sp. n.* Ungarn, ULBRICHT p. 151 Arch. Naturges. 77 1.

†*Xylonomus lambei* *sp. n.* Tertiary Canada, HANDLIRSCH p. 99 Contr. Canad. Pal. 2.

Zaleptopygus *gen. n.* p. 294, *obereae* *sp. n.* Illinois p. 295, VIERECK Proc. U. S. Nation. Mus. 41.

BRACONIDAE.

Aërophiloides *gen. n.* near *Aërophilus*, *testaceator* *sp. n.* Neu Guinea, STRAND p. 131 Int. ent. Zeitschr. 5.

Agathis varipilosella *sp. n.* New Guinea, CAMERON Nova Guinea 9 p. 244.—*A. fulgidipennis* *sp. n.* Solomon Islands, CAMERON P. Linn. Soc. N.S.W. 36 p. 356.—*A. rubriventris* p. 320, *guyanensis* p. 321, *spp. n.*, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Apanteles lacticolor *sp. n.* Europe p. 475, VIERECK Proc. U. S. Nation. Mus. 40.—*A. (Dolichogenidea) banksi* *sp. n.* Maryland p. 173, *A. (Prota-panteles) bedelliae* *sp. n.* District of Columbia p. 174, *africanus* *sp. n.* Transvaal p. 174, *beneficus* *sp. n.* p. 175, Portuguese East Africa p. 175, *A. chrysippi* *sp. n.* Portuguese East Africa p. 175, *cinctiformis* *sp. n.* Virginia p. 176, *griffini* *sp. n.* New York p. 177, *A. (Pseudapanteles consimilis* New York p. 177, *etiellae* Washington p. 178, *spp. n.*, VIERECK T.c.—*A. langenburgensis*, *cozalis* Nyassa-See, *trochanteratus* Albert-See, *spp. n.*, SZÉPLIGETI pp. 412–413 Wiss. Ergebn. Z. Afrika Exp. 3.—*A. africanus* p. 206, *eurygaster* p. 207, *fuscinervis*, *testaceiventris*, p. 206, *testaceolineatus*, *testaceiventris*, *transvaalensis*, p. 208, *spp. n.*, S. Africa, CAMERON Ann. Transv. Mus. 2.—*A. betheli* *sp. n.* Colorado p. 402, VIERECK Proc. U. S. Nation. Mus. 39.—*A. philocampus*, *sydneyensis*, *spp. n.*, Neu South Wales, CAMERON P. Linn. Soc. N.S.W. 36 p. 342.—*A. concordalis* p. 325, *leucochiloneae lineodos*, p. 326, *philocampus* *guyanensis*, p. 327, *spp. n.*, Guiana,

CAMERON J. R. Agric. Soc. Demerara 1.—*A. glomeratus*, embriologia, biologia; GRANDORI Redia 7 pp. 363–428 4 fig. 4 tav.

Aphidius aurantii *sp. n.* Napoli parassita di *Toxoptera auranti*, PIER-ANTONI Atti Ist. incorragg. 59 1907 pp. 2–9 1 tav.—*A. nigripes* p. 424, GAHAN J. Econ. Ent. 4.—*A. gillettei* p. 171, *juniperaphidis* p. 174, *spp. n.*, Colorado, GAHAN Bull. Agric. Exp. Sta. Maryland 152.

Arcogaster erythroxus *sp. n.* N. S. Wales, CAMERON P. Linn. Soc. N.S.W. 36 p. 340.

Aspilota incompleta *sp. n.* Ruwenzori, SZÉPLIGETI p. 418 Wiss. Ergebn. Z. Afrika Exp. 3.

Atanycolus africanus *sp. n.* O.-Afr., SZÉPLIGETI p. 393 T.c.

Bacuma rufa *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 194.

Baeocentrum *n. n.* für *Brachycentrus* Szépl. 1907, SCHULZ p. 65 Zool. Ann. 4.

Bathyaulax dubiosus *sp. n.* O.-Afr., SZÉPLIGETI p. 397 Wiss. Ergebn. Z. Afrika Exp. 3.

Biosteres brasiliensis, *arcolatus*, *spp. n.*, Brasilien, SZÉPLIGETI Boll. Lab. Zool. Portici 5 p. 285.

Biphymaphorus *gen. n.*, *rufithorax*, *superbus*, *variegatus*, *spp. n.*, Albert-See, SZÉPLIGETI pp. 407–408 Wiss. Ergebn. Z. Afrika Exp. 3.

Biroia rugipleuris *sp. n.* Neu Guinea, STRAND p. 118 Int. ent. Zeitschr. 5.—*B. ruficollis* *sp. n.* Guiana, CAMERON p. 321 J. R. Agric. Soc. Demerara 1.

Bracon viduus, *opacus*, *spp. n.*, Nyassa-See, SZÉPLIGETI p. 405 Wiss. Ergebn. Z. Afrika Exp. 3.—*B. dorsalis* *sp. n.* Formosa, MATSUMURA p. 148 Mem. Soc. ent. Belgique 18.—*B. froggattii*, *eucalypti*, *spp. n.*, New South Wales, CAMERON P. Linn. Soc. N.S.W. 36 pp. 339–340.—*B. leucostigmus* *sp. n.* Solomon Is., CAMERON T.c. p. 352.—*B. ingratus*, *mediatus*, *consonus*, p. 306, *docilis*, *inculeatus*, *curvisulcatus*, p. 307, *longicanaliculatus*, *fuscinervis*, *obscurilineatus*, p. 308, *spp. n.*, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Callidia *n. n.* für *Eumorpha* Szépl. 1908, SCHULZ p. 68 Zool. Ann. 4.

Camploneurus rubrituberculatus, *pili-tarsis*, p. 235, *quadrifasciatus*, *insuliculus*, p. 236, *lineaticaudis*, *tenuilineatus*, p. 237, *brevistriolatus*, *alkmaarensis*, p. 238, *heterospilus*, *heuveleensis*, p. 239, *cultricaudis*, *basiornatus*, p. 240, *spp. n.*, New Guinea, CAMERON Nova Guinea 9.

Campyloneurus transiens Nyassa-See, *rufus* Linjanti, *spp. n.*, SZÉPLIGETI p. 399 Wiss. Ergebn. Z. Afrika Exp. 3.—*C. bicolorinus* n. nom. for *bicolor*, VIERECK Proc. U. S. Nation. Mus. 40 p. 477.

Cardiochiles type *Ichneumon saltator*, VIERECK Proc. Ent. Soc. Washington 13 p. 123.

Cenocoelius annulicornis p. 246, *latian-nulatus* p. 247, *albopilosellus* p. 248, *spp. n.*, New Guinea, CAMERON Nova Guinea 9.

Centistes flavipes *sp. n.* O.-Afr., SZÉPLIGETI p. 416 Wiss. Ergebn. Z. Afrika Exp. 3.

Chaolta pallidiceps *sp. n.* New Guinea, CAMERON Nova Guinea 9 p. 233.

Chelonus pilosulus *sp. n.* Nyassa-See, SZÉPLIGETI p. 412 Wiss. Ergebn. Z. Afrika Exp. 3.—*C. rufoscapus* *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 200.—*C. megaspilus* *sp. n.* N. S. Wales, CAMERON P. Linn. Soc. N.S.W. 36 p. 341.—*C. salamonis* *sp. n.* Solomon Is., CAMERON p. 355 T.c.—*C. shoshone-anorum* *sp. n.* Colorado p. 402, VIERECK Proc. U. S. Nation. Mus. 39.—*C. knabi* *sp. n.* Virginia p. 178, VIERECK Proc. U. S. Nation. Mus. 40.—*C. bipustulatus* *sp. n.* Chile p. 476, VIERECK T.c.

Coelalysia *gen. n.* *Alysiinae*, *lutea* *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2.

Coeloides brunneri *sp. n.* Montana p. 293, VIERECK Proc. U. S. Nation. Mus. 41.

Crassomicrodus curvinervis *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 205.

Cremnops maculipes, *punctipennis*, p. 322, *parvifasciatus*, *nigrobalteata*, p. 323, *spp. n.*, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Cryptoxilos *gen. n.* *dichromorphus* *sp. n.* Brazil, VIERECK Proc. U. S. Nation. Mus. 40 p. 180.

Cyclaulax *gen. n.* near *Iphiaulax*, *grandiceps* *sp. n.* Guiana, CAMERON p. 312 J. R. Agric. Soc. Demerara 1.

Cyclocormus *gen. n.* *Blacinae*, *luteus* *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 209.

Cyanopteridea *gen. n.* type *Cyanopterius clypeolus* Szep. p. 476, VIERECK Proc. U. S. Nation. Mus. 40.

Diachasma crawfordi *sp. n.* Mexico p. 161, VIERECK T.c.

Diaeretus nipponensis *sp. n.* Japan p. 182, VIERECK T.c.

Disophrys seminiger *sp. n.* Nyassa-See, SZÉPLIGETI p. 414 Wiss. Ergebn. Z. Afrika Exp. 3.—*D. erythropus* *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 205.—*D. nigrivertex* *sp. n.* Neu Guinea, STRAND p. 114 Int. ent. Zeitschr. 5.—*D. pilipes* *sp. n.* Guiana, CAMERON p. 321 J. R. Agric. Soc. Demerara 1.

Dolichogenidea subgen. *n.* (*Apanteles*) p. 173, VIERECK Proc. U. S. Nation. Mus. 40.

Dolichozele *gen. n.* *koebelei* *sp. n.* Brazil VIERECK T.c. p. 182.

Ephedrus nigricornis *sp. n.* Colorado p. 159, GAHAN Bull. Agric. Exp. Sta. Maryland 152.

Erythrometeorus *gen. n.* near *Aridelus* p. 317, *reticulatus* *sp. n.* Guiana p. 318, CAMERON J. R. Agric. Soc. Demerara 1.

Euagathis maculipes *sp. n.* New Guinea, CAMERON Nova Guinea 9 p. 245.

Exenterus lophyri *sp. n.* Nebraska p. 404, VIERECK Proc. U. S. Nation. Mus. 39.

Foersteria nitida *sp. n.* S. Africa, CAMERON Ann. Transv. Mus. 2 p. 204.

Gastrotheca areolata p. 202, *melanocera*, *trimaculata*, p. 201, *spp. n.*, S. Africa, CAMERON T.c.

Glyptomorpha concolor *sp. n.* O.-Africa, SZÉPLIGETI p. 393 Wiss. Ergebn. Z. Afrika Exp. 3.

Habrobracon beneficentior *sp. n.* Portuguese East Africa, VIERECK Proc. U. S. Nation. Mus. 40 p. 182.—*H. triangularis* *sp. n.* O.-Afr., SZÉPLIGETI p. 405 Wiss. Ergebn. Z. Afrika Exp. 3.—*H. hebetor*, *Lebensweise*, BERLINER Zs. Getreidew. 3 pp. 245–248.

Hecabolus quadricolor sp. n. New Guinea, CAMERON Nova Guinea 9, p. 243.

Hemibracon lucidus sp. n. Nyassa-See, SZÉPLIGETI p. 398 Wiss. Ergebn. Z. Afrika Exp. 3.

Heterospilus mordellistenae sp. n. Ohio p. 403, VIERECK Proc. U. S. Nation. Mus. 39.

Hormiopterus striatus, persimilis, flavipes, spp. n., Nyassa-See, SZÉPLIGETI p. 409 Wiss. Ergebn. Z. Afrika Exp. 3.—*H. graciliformis* sp. n. Kansas, VIERECK Proc. U. S. Nation. Mus. 40 p. 183.

Hormius testaceus sp. n. S Africa, CAMERON Ann. Transv. Mus. 2 p. 195.

Hybothetus n. n. für *Hybothorax* Szépl. 1906, SCHULZ p. 71 Zool. Ann. 4.

Idiasta nigriceps, bicolor, spp. n., Nyassa-See, SZÉPLIGETI p. 417 Wiss. Ergebn. Z. Afrika Exp. 3.

Ipbiaulax thoracicus, persimilis, 10-maculatus, semiluteus, xanthocephalus, hemixanthopterus, spp. n., O.-Afr., SZÉPLIGETI pp. 403-404 T.c.—*I. pretoriaensis* sp. n. S. Africa, CAMERON Ann. Transv. Mus. 2 p. 192.—*I. neger* var. n. *camerunicus*, STRAND p. 485 Mitt. Mus. Berlin 5.—*I. tebaënsis, braconiformis, tamicola*, pp. 97-98, *melancholica* Neu Guinea, *keyanus*, Key-Ins. p. 103, spp. n., STRAND Int. ent. Zeitschr. 5.—*I. obscuricarinatus, dolens*, p. 309, *medianus, villosus*, p. 310, *rotundinervis* p. 311, spp. n., Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Ipobracon fenestratus, longicornis, caudatus, spp. n., O.-Afr., SZÉPLIGETI p. 401 Wiss. Ergebn. Z. Afrika Exp. 3.

Lasiophorus fortispinus sp. n. Guiana, CAMERON p. 311 J. R. Agric. Soc. Demerara 1.

Limnerium (Horogenes) discoocellellae sp. n. Washington p. 404, VIERECK Proc. U. S. Nation. Mus. 39.

Lissagathis gen. n. *Braconidarum* near *Agathis, bicarinata* sp. n. New Guinea, CAMERON Nova Guinea 9 p. 245.

Lissophrymnus gen. n. *Spathiinae* p. 312, *annulicaudis* sp. n. Guiana p. 313, CAMERON J. R. Agric. Soc. Demerara 1.

Lysiphlebus flavidus sp. n. Colorado p. 186, GAHAN Bull. Agric. Exp. Sta. Maryland 152.—*L. tritici*, parasite of

Toxoptera graminum HUNTER Science 31 p. 190.

Macrocentrus lutens sp. n. Albert-See, SZÉPLIGETI p. 415 Wiss. Ergebn. Z. Afrika Exp. 3.—*M. annulicornis* p. 211, *latisulcatus, lutens*, p. 210, *nigro-ornatus* p. 211, *pallidistigmus* p. 210, spp. n., S. Africa, CAMERON Ann. Transv. Mus. 2.—*M. papuanus* sp. n. Neu Guinea, STRAND p. 131 Int. ent. Zeitschr. 5.—*M. (Amicrophus) crambivorus* sp. n. U. S., VIERECK Proc. U. S. Nation. Mus. 40 p. 183.

Macronura elegans Nyassa-See, *quadricolor* O.-Afr., spp. n., SZÉPLIGETI pp. 399-400 Wiss. Ergebn. Z. Afrika Exp. 3.

Medinoschiza gen. n., *cratocephala*, sp. n. Solomon Is., CAMERON P. Linn. Soc. N.S.W. 36 p. 354.

Megalommum maculipenne, fasciatipenne, spp. n., New Guinea, CAMERON Nova Guinea 9 p. 241.

Meganura tricolor sp. n. Nyassa-See, SZÉPLIGETI p. 396 Wiss. Ergebn. Z. Afrika Exp. 3.

Megarhogas concolor, albitarsus, spp. n., O.-Africa, SZÉPLIGETI p. 410 Wiss. Ergebn. Z. Afrika Exp. 3.—*M. there-trae* sp. n. Sumatra p. 294, VIERECK Proc. U. S. Nation. Mus. 41.—*M. melan-onotus, fuscipalpis*, spp. n., Guiana, CAMERON p. 315 J. R. Agric. Soc. Demerara 1.

Meteorus loxostegei sp. n. Colorado p. 401, VIERECK Proc. U. S. Nation. Mus. 39.

Microbracon howardi sp. n. Portuguese East Africa, VIERECK Proc. U. S. Nation. Mus. 40 p. 184.—*M. juglandis*, life history pp. 24-29 pls. ix & x, DOTEN Agric. Exp. Sta. Nevada Tech. Bull. No. 78.

Microgaster bicolor sp. n. O.-Afr., SZÉPLIGETI p. 414 Wiss. Ergebn. Z. Afrika Exp. 3.—*M. formosanus* sp. n. Formosa, MATSUMURA p. 149 Mem. Soc. ent. Belgique 18.—*M. comptanae* sp. n. Colorado p. 403, VIERECK Proc. U. S. Nation. Mus. 39.

Microplitis melianae sp. n. Iowa, VIERECK Proc. U. S. Nation. Mus. 40 p. 185.

Minanga bimaculata sp. n. S. Africa, CAMERON Ann. Transv. Mus. 2 p. 202.

Monophadnus foveiceps p. 327, *spilnotus*, *guyanensis*, p. 328, *trichiotomus* p. 329, **spp. n.**, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Neodiospilus **gen. n.** near *Microcentrus terebrator*, *flavipes*, **spp. n.**, Nyassa-See, SZÉPLIGETI pp. 415–416 Wiss. Ergebn. Z. Afrika Exp. 3.

Neotrimoriodes **gen. n.** near *Neotrimorus*, *dentifer* **sp. n.** Neu Guinea, STRAND p. 104 Int. ent. Zeitschr. 5.

Opius tryoni **sp. n.** N. S. Wales, CAMERON P. Linn. Soc. N.S.W. 36 p. 343.—*O. australiano diffuso* in Italia contro *Dacus oleae*, BERLESE Redia 7 p. 470.

Orgilus ashmeadi **sp. n.** Manila p. 477, VIERECK Proc. U. S. Nation. Mus. 40.

Paracollyria carinifrons **sp. n.** S. Africa, CAMERON Ann. Transv. Mus. 2 p. 181.

Pararhyssalus **gen. n.**, *longipalpis* **sp. n.** Guiana, CAMERON p. 316 J. R. Agric. Soc. Demerara 1.

Pegarthrum fuscipennis **sp. n.** Solomon Islands, CAMERON P. Linn. Soc. N.S.W. 36 p. 355.

Perreyia ruficollis **sp. n.** Guiana, CAMERON p. 329 J. R. Agric. Soc. Demerara 1.

Phaenocarpa pulchricornis **sp. n.** Ruwenzori, SZÉPLIGETI p. 417 Wiss. Ergebn. Z. Afrika Exp. 3.

Phanerotoma curvimaculata p. 203, *curvicarinata* p. 204, *pallidipes* p. 203, **spp. n.**, S. Africa, CAMERON Ann. Transv. Mus. 2.—*P. pallida* p. 319, *spilaspis* p. 320, **spp. n.**, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Platybracon nigriceps **sp. n.** Queensland, CAMERON P. Linn. Soc. N.S.W. 36 p. 338.—*P. insularis* **sp. n.** Solomon Is., CAMERON T.c. p. 353.—*P. bicolor* **sp. n.** Ituri, SZÉPLIGETI p. 394 Wiss. Ergebn. Z. Afrika Exp. 3.

Platyspathius **gen. n.** *pictipennis* **sp. n.** Portuguese East Africa, VIERECK Proc. U. S. Nation. Mus. 40 p. 185.

Plaxopsis pulchripennis Nyassa-See, *trifasciatus* Albert-Edw.-See, **spp. n.**, SZÉPLIGETI p. 395 Wiss. Ergebn. Z. Afrika Exp. 3.

Polemochartus **n. n.** für *Polemon* Giraud 1863, SCHULZ p. 61 Zool. Ann. 4.

Polystenidea **gen. n.**, *parksii* **sp. n.** Kansas, p. 186, *metacommet* **sp. n.** Connecticut p. 187, VIERECK Proc. U. S. Nation. Mus. 40.

Protelus lutens **sp. n.** Sydney, CAMERON P. Linn. Soc. N.S.W. 36 p. 341.

Pseudobracon fenestralis **sp. n.** O.-Afr., SZÉPLIGETI p. 406 Wiss. Ergebn. Z. Afrika Exp. 3.

Rhadinobracon filicaudis **sp. n.** Albert-See, SZÉPLIGETI p. 397 T.c.

Rhamnura clavata **sp. n.** Albert-See, SZÉPLIGETI p. 396 T.c.

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Rhopalotoma **gen. n.** *Diopsilinae*? p. 318, *crassitarsis* **sp. n.** Guiana p. 319, CAMERON T.c.

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Spilomicrodus **gen. n.** near *Zelomorpha* p. 323, *nigriceps* **sp. n.** Guiana p. 324, CAMERON J. R. Agric. Soc. Demerara 1.

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Xanthomicrogaster gen. n. *Microgasterinae* p. 324, *fortipes*, *ruficollis*, spp. n., p. 325, Guiana, CAMERON J. R. Agric. Soc. Demerara 1.

Xanthopimpla antherae, *watsoni*, spp. n., Bengal, CAMERON pp. 46-47 Soc. entom. 26.

Xenobolus gen. n. *Rhogadini* p. 199, *rufus* p. 200 sp. n. S. Africa, CAMERON Pretoria Ann. Transv. Mus. 2.

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STEPHANIDAE, MEGALYRIDAE.

Coelostephanus gen. n. p. 232, *rufus* sp. n. Mexico p. 233, KIEFFER Ann. Soc. ent. France 80.

Diastephanus cucodon p. 116, *fuscidens* p. 118, Kamerun, spp. n., KIEFFER Boll. Soc. ent. Ital. 41.

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atriceps, p. 221, *longiventris*, *flavicornis*, p. 222, *albianus* p. 223, spp. n., *A. nigriiventris* var. n. p. 224, KIEFFER Ann. Soc. ent. France 80.

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Foenus pruiniceps sp. n. New Guinea, CAMERON Nova Guinea 9 p. 202.

Gasteruption incisum p. 91, *fusci-vagina* p. 92, *flavonotatum* p. 94, *fili-cauda* p. 95, *tenuicauda*, *liebeli*, p. 96, *capicola* p. 97, *ornatipes*, *claripennis*, p. 98, *doederleini* p. 99, *solmsi* p. 100, Süd-Afrika, *tropicale* p. 93, *praeruptum* p. 94, Kongo, spp. n., KIEFFER Bull. Soc. Metz 27.—*G. brasiliæ* sp. n., KIEFFER p. 305 Bull. Soc. ent. France 1911.—*G. bihamatum* p. 192, *nigrinerve* p. 193, *microthorax* p. 194, *albicuspis*, *trianguliferum*, p. 196, *brevicuspis* p. 196, *valens* p. 197 fig. 7, *calothecus*, *leptothecus*, p. 198, *melanotarsus*, *sericeipes* p. 199, *subaequale* p. 200, *robustum* p. 201, *fuscimanus* p. 202, *nervosum* p. 203, *leucobrachium* p. 204, *pæcilo-thecus*, *sinarum*, p. 205, *himantho-phorum* p. 206, *leucostictum*, *lampropleurum*, p. 207, *flavicuspis* p. 208, *montivagum*, *leucochirus*, p. 209, *oriptanum*, *leptodomum*, p. 210, *monticola* p. 211, *tricoloriceps*, *anale*, p. 212, *bicolor* p. 213, spp. n., *leucobrachium xanthopus* var. n. p. 205, *fallens* n. n. pro *fallaciosum* Szepl., *breviscutum* n. n. pro *flavitarise* Schlett. 1885, p. 213, KIEFFER Ann. Soc. ent. France 80.—*G. fallax* n. n. for *fallaciosum* Sz., *leucotarsus* n. n. for *leucopus* Kieff., KIEFFER p. 121 Boll. Soc. ent. Ital. 41.—*G. erythrostomum* sp. n. Borneo, CAMERON p. 57 Entomologist 44.—*G. moszkowskii* Neu Guinea, *tomentiferum*, p. 132, *annulitibiale* p. 150 N. S. Wales, spp. n., STRAND Int. ent. Zeitschr. 5.

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Hyptia spinulosa sp. n., KIEFFER p. 152 Ann. Soc. ent. France 80.

Hyptiogaster grossitarsis p. 179, *macrochela*, *pilosa*, p. 180, *microchela* p. 181, spp. n., KIEFFER T.c.

Megischus claripennis, *palliditarsis*, p. 56, *ruficollis* p. 57, spp. n., Borneo, CAMERON Entomologist 44.—*M. froggattii* sp. n. Solomon Islands, CAMERON P. Linn. Soc. N.S.W. 36 p. 357.

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Prosevania subg. n. in gen. *Evania* *P. afra* sp. n., KIEFFER p. 157 T.c.

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hegesander, *regeli* subsp. n. *minutianus*,
autonoe subsp. n. *orchomenus*, Tianshan,
geyeri subsp. n. *aristonius* Amasia,
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salazar Tasmania, FRUHSTORFER p. 305
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osyris subsp. n. *nephthys* and *frenus*,
aroa subsp. n. *serapis*, *haemonia* subsp. n.
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n. *narkunda*, Himalaya, *dura* subsp. n.
mansonia Tonkin, *rohria* subsp. n.
gambara Assam, *apara* Tonkin, *enima*
Sumatra and *godana* Java, *europa*
subsp. n. *niladana* Himalaya, *ragalva*

d 27

Karvar, nudgara Andamanen, kumara Engano, mahamaya Lombok, alaca Palawan and cevanna Mindanao, arete subsp. n. anatha, advipa, velitra and nagaraja Molukken, dytra subsp. n. yoga Malay Archip., permagnis China, anunda Java and sambaluna Lombok, minerva subsp. n. tritogeneia Tenasserim, kansa subsp. n. zeugitana Assam, vaga Tenerassim, vindhya subsp. n. ladesta Tenerassim, mekara f. n. vajra, *L. m.* subsp. n. zuchara Assam, crignana Tonkin, gopaka Perak, debata Assam, etc., and sumati Borneo, *L. manthara* f. n. mangala Java, chandica subsp. et ff. n. flanova, suvarna, rahula, ratnapandi, sisapon, byzacus jomaria, namura and marga Indien, Malay Arch., diana subsp. n. celega Hondo, gulnihai f. n. issa Birma, latiaris subsp. n. perimele Tenerassim verma subsp. n. sintica Sikkim and satarnus China, pp. 320-324, *L. plistia* n. n. für gelduba Fruhst. p. 394, FRUHSTORFER Seitz Gr.-Schm. Indo-austr. Div.

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mataurus Guimaras and hernica Sulu-Archipel, janardana subsp. n. circella Philippinen, perseus f. n. prasias Java, mineus subsp. n. macromalayana Sumatra, newayana sp. n. Celebes, *M. horsfieldi* subsp. n. decia Java p. 345, perseoides subsp. n. igilia Mysore p. 346, mestra subsp. n. vetus Bhutan, gotama f. n. fulginea subsp. n. seriphus Japan p. 348, thyateira sp. n. Borneo p. 349, evara subsp. n. evarida, taxilides sp. n. Neu-Guinea p. 351, anaxias subsp. n. aemate Birma and bisaltia Perak p. 353, francisca subsp. n. vercella Ost-Asie p. 354, sudra subsp. n. volsina Java and tannis Bali, mystes f. n. tunicula Siam p. 355, FRUHSTORFER Seitz Gr.-Schm. Indoaustr. Div.

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(x-19186 j)

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LIBYTHEIDAE.

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Surinam, *melior* Amazonas, *A. eudaemon*
Peru, *pomposa* S. Paulo de Olivenca,
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solita Amazonas, Bolivia, STICHEL
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ictericum Godm. & Salv., STICHEL
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Caria tabrenthia f. n. *philema* Ecuador,
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erythromelas Sepp., subsp. n. *erythraea*
Brasilien, *erotylus* sp. n. Peru, STICHEL
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Chalodeta gen. n. für *Calephelis*
theodora Feld., *panurga* sp. n. loc. inc.,
STICHEL p. 15 T.c.

Charis chrysus f. n. *polypoecila*
Panama, subsp. n. *neglecta* Colombia,
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anius Cr., *aphanis* Uruguay, *xanthosa*
loc. inc., spp. n., STICHEL pp. 15 19-
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Echenais alector f. n. *glaucobithris*
Peru, subsp. n. *asemna* Bolivia, p. 31,
sejuncta, *charessa*, spp. n., *pentheia*
subsp. n. *penthides*, *echion* and *nilios*,
S. Am., pp. 32-36, STICHEL T.c.

Elymnias panthera f. n. *defasciata*
Labuan p. 372, *congruens* subsp. n.
endida Bohol, *nesaea* subsp. n. *cortona*
Birma, p. 379, *malelas* f. n. *subdecorata*,
subsp. n. *nilamba* and *ivena* Indien
etc., p. 381, *kamara* ff. n. *pareuploea*
and *pseudalumna* Java, subsp. n.
lombokiana Lombok, *ceryx* f. n. *hestinia*

Java, pp. 382-383, *cumaea* f. n. *pseu-*
deuploea Celebes p. 385, *cybele* ff. n.
brunnescens, *violacea*, *pseudosalpinx* and
terentilina, Molukken, p. 389, FRUH-
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Div.

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russula sp. n. Brasilia, *tenedia* subsp. n.
avidula Brasilia, STICHEL Berliner ent.
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Amazonas and *signata* Rio grande do
Sul, *H. aurinia* subsp. n. *incana* Peru,
gauchoana Uruguay, *H. notialis*, *cine-*
ricia, *guttata*, spp. n., Argentina,
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Paraguay and *diadema* Peru, f. n.
hemicosmetica Brasil, STICHEL p. 58 T.c.

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sima Amazonas, *carmentis* Bolivia,
N. lisimon subsp. n. *erythraicum*
Amazonas, *plinthobaphis* Peru, STICHEL
pp. 62-63 T.c.

Nymula phillone subsp. n. *paulistina*
Brasil., *brennus* sp. n. Guayana, STICHEL
pp. 65-66 T.c.

Orimba epitus subsp. n. *epiphanis*
Amazonas, *paroemia* Ecuador, *O.*
epilecta sp. n. Peru, STICHEL pp. 68-
71 T.c.

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amarynthina Feld., STICHEL p. 59 T.c.

Phaenochitonina gen. n. near *Mesene*,
sagaris f. n. *matronalis* Brasilia, *vittata*
sp. n. Itaituba, STICHEL pp. 51-53 T.c.

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cinna, *andraemon* sp. n. Colombia,
STICHEL pp. 75-77 T.c.

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Bindahara ines sp. n. Andaman islds. p. 27 pl. dccx figs. 3, SWINHOE Lep. Ind. 9.

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Chliaria balua Sarawak sp. n., MOULTON p. 151 fig. 6 T.c.—*C. watsoni* sp. n. India p. 83 pl. dccxxi figs. 5, SWINHOE Lep. Ind. 9.

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Arctornis alba ab. n. *depuncta*, STRAND Seitz Gr.-Schm. pal. Div. p. 123.

Argoraea atrivena Colombie sp. n., DOGNIN p. 12 Hét. nouv. 3.

Argyrooides affinis p. 41, *flavicornis, fuscipes*, p. 42, spp. n., S. America, ROTHSCHILD Nov. Zool. 18.—*A. variegata* sp. n. Parana, KAYE p. 145 Entomologist 44.—*A. rubricauda* Colombie sp. n., DOGNIN p. 8 Hét. nouv. 2.—*A. quindiniensis* Colombie sp. n., DOGNIN p. 4 Hét. nouv. 3.—*A. notha* p. 179, *spectrum* p. 180, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Arhacia corina sp. n. Costa Rica, SCHAUS p. 266 Ann. Nat. Hist. 7.—*A.* and *Lirimiris*; distinctions p. 616, *A. lignaris* sp. n. Costa Rica p. 615, SCHAUS T.c.

Arva callima, perfida, catori, obliqua, p. 546, *umbrata, pinodes*, p. 547, spp. n., Trop. Africa, BETHUNE-BAKER Ann. Nat. Hist. 7.—*A. nigrofascia* sp. n. Formosa, WILEMAN p. 149 Entomologist 44.—*A. leucoides* sp. n. China, STRAND Seitz Gr.-Schm. pal. Div. p. 121.

Artace lilloi, A. ? bipunctata, spp. n., Argentina, GIACOMELLI p. 33 An. Soc. Argentina 72.

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Aspiducha gen. n. type *Clathe pyrso-*
coma Turn., TURNER p. 94 Ann. Queens-
land Mus. 10.

Astapa gen. n. near *Hyperaeschra*
p. 40, *signata* sp. n. p. 41, Amérique
sud, DOGNIN Hét. nouv. 2.

Asura limbata p. 110, *pica* p. 111,
spp. n., Formosa, WILEMAN Ento-
mologist 44.—*A. crenulata, pectinata,*
xantha, spp. n., Angola, BETHUNE-
BAKER p. 537 Ann. Nat. Hist. 7.—*A.*
anaemica sp. n. N. Guinea, HAMPSON
p. 405 Ann. Nat. Hist. 8.

Autochloris mathani sp. n. Colombia,
ROTHSCHILD p. 27 Nov. Zool. 18.

Automeris cryptica Colombia p. 51,
sinuosa Guyane p. 52, spp. n., DOGNIN
Hét. nouv. 2.—*A. flexilineata* Colombie
sp. n., DOGNIN p. 31 Hét. nouv. 4.—*A.*
brutus sp. n. Bolivia, STRAND p. 70
Ent. Rdsch. 28.

Automolis priscilla sp. n. Costa Rica,
SCHAUS p. 183 Ann. Nat. Hist. 7.—*A.*
pinon sp. n. Brazil, DRUCE p. 138
Ann. Nat. Hist. 8.—*A. tenuifascia*
Colombie sp. n., DOGNIN p. 8 Hét.
nouv. 3.—*A. flavoplagiata* Colombia
p. 157, *surinamensis* Surinam p. 158,
spp. n., ROTHSCHILD Nov. zool. 18.

Aziocleta gen. n. *Eupterotidae* p. 134,
perisema sp. n., Evelyn Scrub, TURNER
Ann. Queensland Mus. 10.

Azaxia dyari sp. n. Costa Rica,
SCHAUS p. 615 Ann. Nat. Hist. 7.

Balacra furva sp. n. W. Africa,
HAMPSON p. 394 Ann. Nat. Hist. 8.

Balbura fasciata, intervenata, spp. n.,
Costa Rica, SCHAUS p. 361 Ann. Nat.
Hist. 7.

Bardaxima hippoides sp. n. Costa
Rica, SCHAUS p. 263 T.c.

Baroa siamica sp. n. Siam, HAMPSON
p. 411 Ann. Nat. Hist. 8.

Beralade (Chilena) pygmula sp. n.
Pretoria, STRAND p. 147 Ann. Soc. ent.
Belgique 55.

Blera modulata sp. n. Costa Rica,
SCHAUS p. 618 Ann. Nat. Hist. 7.

Boriza argentipunctata Amérique sud
sp. n., DOGNIN p. 32 Hét. nouv. 2.

Borocera madagascariensis, GRANGEON
Lab. étud. soie Lyon 14 pp. 101-118
fig.

Brachylia inconspicua, dentilinea,
spp. n., Colombia, DRUCE p. 290 Ann.
Nat. Hist. 7.

Brahmaea tridentata p. 249 pl. xiii
fig. 2, *maculata* p. 250 fig. 3, spp. n.,
CONTE Lab. étud. soie Lyon 14.—*B.*
widenmanni ab. n. *conjuncta* O.-Afr.,
STRAND p. 120 D. ent. Zs. Iris 25.

Bunaea maasseni, fenestricatula, spp.
n., O.-Africa, STRAND pp. 297-298
Mitt. Mus. Berlin 5.

Byblisia albaproxima sp. n. Lagos,
BETHUNE-BAKER p. 575 Ann. Nat.
Hist. 7.

Calidota rudis sp. n. Costa Rica,
SCHAUS p. 613 Ann. Nat. Hist. 7.

Caligula boisduvali subsp. n. *fallax*
Wladiwostok, *lindia* subsp. n. *bonita*
Tibet, JORDAN Seitz Gr.-Schm. pal.
Div. pp. 217-218.

Callimorpha quadripunctaria, luc-
tuosa, ab. n. p. 28, OBERTHÜR Et. Lep.
comp. fasc.

Caloecia gen. n. type *Dendrolimus*
juvenalis p. 10 pl. iii ff. 5 & 6, BARNES
& McDUNNOUGH Cont. Nat. Hist. Lep.
N. Amer. 1 No. 2.

Calonotos antennata p. 39, *hoffmannsi*,
opalizans, longipennis, p. 40, spp. n.,
S. America, ROTHSCHILD Nov. zool.
18.

Catarctia subrosea sp. n. Lokoja,
BETHUNE-BAKER p. 558 Ann. Nat.
Hist. 7.

Catharisa gen. n. *Saturniidae, cerina*
sp. n. Paraguay, JORDAN p. 133 Nov.
Zool. 18.

Celama carilla sp. n. Costa Rica,
SCHAUS p. 355 Ann. Nat. Hist. 7.—*C.*
ochrolopha sp. n. India, HAMPSON p. 397
Ann. Nat. Hist. 8.

Ceramidia cyanopasta Venezuela sp.
n., DOGNIN p. 10 Hét. nouv. 2.

Cerura laqueata sp. n. Costa Rica,
SCHAUS p. 267 Ann. Nat. Hist. 8.—*C.*
argentina Amérique sud sp. n., DOGNIN
p. 25 Hét. nouv. 2.—*C. interrupta*
subsp. n. *leucotera* Persia, STICHEL
p. 116 Zs. wiss. Insektbiol. 7.


Ceryx flava sp. n. Angola, BETHUNE-
BAKER p. 530 Ann. Nat. Hist. 7.

Chalidra hibrida p. 279, *luculenta* p. 280, *praelauta* p. 281, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*C. albidula* p. 30, *fitilla*, *comana*, p. 31, *flavodiscata* p. 32, Guyane, **spp. n.**, DOGNIN Hét. nouv. 2.


Chalia muenzneri **sp. n.** O.-Africa, STRAND p. 305 Mitt. Mus. Berlin 5.

Chamaïta hirta **sp. n.** Formosa, WILEMAN p. 110 Entomologist 44.

Chionaema rubritermina **sp. n.** Lagos, BETHUNE-BAKER p. 534 Ann. Nat. Hist. 7.

 *Chlorocrisia* **gen. n.** for *Diacrisia irrorata* Rothschild., HAMPSON p. 408 Ann. Nat. Hist. 8.

Chrostosoma sitiona **sp. n.** Costa Rica, SCHAUS p. 175 Ann. Nat. Hist. 7.—*C. viridipunctatum*, *schausi*, **spp. n.**, S. America, ROTHSCILD p. 30 Nov. Zool. 18.

 *Chrysectropa* **gen. n.** *Chrysopolomidae* p. 566, *unilinea* **sp. n.** W. Africa p. 567, BETHUNE-BAKER Ann. Nat. Hist. 7.

Chrysocale gigas **sp. n.** Peru, ROTHSCILD p. 39 Nov. Zool. 18.

Chrysochlorosia magnifica **sp. n.** Costa Rica, SCHAUS p. 363 Ann. Nat. Hist. 7.

Chrysopoloma ansorgei, *microsticta*, **spp. n.**, Trop. Africa, BETHUNE-BAKER p. 566 Ann. Nat. Hist. 7.

Chrysopsyche albicilia, *ladburgi*, p. 562, *jacksoni*, *flaveola*, p. 563, **spp. n.**, Trop. Africa, BETHUNE-BAKER T.c.

Chrysorabdia vilemani **sp. n.** Formosa, HAMPSON p. 401 Ann. Nat. Hist. 8.

Chrysostola mellita **sp. n.** Costa Rica, SCHAUS p. 180 Ann. Nat. Hist. 7.—*C. cosmosomoides* **sp. n.** Venezuela, ROTHSCILD p. 157 Nov. zool. 18.

Cicinnus pudens **sp. n.** Costa Rica, SCHAUS p. 191 Ann. Nat. Hist. 7.

Cilix glaucata subsp. n. *depalpata* Himalaya, STRAND Seitz Gr.-Schm. pal. Div. p. 204.

Cisthene meneae, larva p. 229, DYAR Proc. Ent. Soc. Washington 13.

Citheronia regalis, Zucht, UNZICKER Zs. wiss. Insektenbiol. 7 p. 21; Ent. Zs. Frankfurt 25 p. 71.

Claphe inflata p. 371, *coramina* p. 372, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.


Cleapa afra **sp. n.** W. Africa, BETHUNE-BAKER p. 559 Ann. Nat. Hist. 7.

Clemensia mucida p. 366, *cincinnata*, *leopardina*, p. 367, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Cloësia digna **sp. n.** Costa Rica, SCHAUS p. 362 T.c.—*C. normalis* Colombie **sp. n.**, DOGNIN p. 8 Hét. nouv. 3.

Colla opalifera Guyane **sp. n.**, DOGNIN p. 47 Hét. nouv. 2.

Coloradia lois **sp. n.** Montana p. 89, DYAR Proc. Ent. Soc. Washington 13.

 *Comadia* **gen. n.** p. 26 type *Hypopta-bertholdi* p. 27 pl. v f. 6, BARNES & McDUNNOUGH Cont. Nat. Hist. Lep. N. Amer. 1 No. 1.

Corma tephraea **sp. n.** Nigeria, BETHUNE-BAKER p. 555 Ann. Nat. Hist. 7.

Correbia semitransversa **sp. n.** Costa Rica, SCHAUS p. 182 Ann. Nat. Hist. 7.

Correbidia costinotata **sp. n.** Costa Rica, SCHAUS p. 183 T.c.—*C. tristitia* **sp. n.** Guiana, KAYE p. 145 Entomologist 44.

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Cosmosoma lemoulti **sp. n.** Cayenne, ROTHSCILD p. 156 Nov. zool. 18.—*C. gracula* Colombie **sp. n.**, DOGNIN p. 5 Hét. nouv. 2.—*C. brinkleyi*, *garleppi*, *oroyanum*, *mathani*, p. 31, *bricenoi*, *carabayanum*, *viridicingulatum*, *baroni*, p. 32, *flavicostale*, *steinbachi*, *simillimum*, *metallicum*, p. 33, *ichneumonoides*, *stuarti*, *venatum*, *dubium*, *crathidinum*, *citrinum*, p. 34, *rosenbergi*, *parambae*, p. 35, *brasiliense*, *meridense*, p. 36, **spp. n.**, S. America, *teuthras nigrescens* and *lignicolor*, subsp. n., ROTHSCILD Nov. zool. 18.—*C. nobilis* p. 175, *guapila*, *cinctula*, *rubritarsis*, p. 176, *colona*, *angustimargo*, *impudica*, p. 177, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Cosmotriche potatoria ab. n. *atrinerva* Holland, GRÜNBERG Seitz Gr.-Schm. pal. Div. p. 164; *brunnea* n. var. p. 46, THIERRY MIEG Naturaliste 32.

Cossula type *magnifica* p. 22, BARNES & McDUNNOUGH Cont. Nat. Hist. Lep. N. Amer. 1 No. 1.—*C. albicosta* p. 632, *C. ? caerulea* p. 633, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Cossus infantilis, *nina*, **spp. n.**, Costa Rica, SCHAUS p. 632 T.c.—*C. cosseus*, Überwinterung der Raupe, SCHÜTZE D. ent. Zs. Iris 25 p. 6; ab. n. *subnigra*, SCHULTZ p. 84 Soc. entomol. 25; Verpuppung, DAHLGREN Entomol. Tidskr. Stockholm 32 pp. 79–81.

Ctenucha popayana Colombie **sp. n.**, DOGNIN p. 12 Hét. nouv. 2.

Cyanohypsa **gen. n.**, *Hypsidae*, *stefanellii* **sp. n.**, Argentina, GIACOMELLI p. 31 An. Soc. Argentina 72.

Cyclophragma **gen. n.**, *Lasiocampidae*, type *Opsirrhina cyclomela* Low., TURNER p. 94 Ann. Queensland Mus. 10.

Cymbalophora haroldi **sp. n.**, p. 123, OBERTHÜR Et. Lep. comp. fasc. 5 pt. 2.

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Cricula cendrei, mœurs, ANDRÉ Lab. étud. soie Lyon 14 pp. 82–89 fig.

Cruria epicharita **sp. n.** Cape York, TURNER p. 59 Ann. Queensland Mus. 10.

Darna grandis p. 717, *palmeri*, *D. ? furonia* p. 718, **spp. n.**, Ecuador, DRUCE Ann. Nat. Hist. 8.

Dasychira conjuncta **sp. n.** Japan, WILEMAN p. 270 Tr. Ent. Soc. London 1911.—*D. strigidentata*, *ruficosta*, p. 548, *obsoletissima*, *inconspicua*, *perdita*, *exoleta*, p. 549, *ladburyi*, *styx*, p. 550, **spp. n.**, Trop. Africa, BETHUNE-BAKER Ann. Nat. Hist. 7.—*D. fascelina* ab. n. *proletaria* Europa, *dalbergiae* f. n. *kangrana* Himalaya, *flavimacula* f. n. *yatonga* Tibet, STRAND Seitz Gr.-Schm. pal. Div. pp. 112–116.—*D. pudibunda*, Metamorphose, Frass, Auftreten im Gouv. Charkov (Russ.),

JAROŠEVSKIJ Hinterlassene entomologische Notizen pp. 122–137.

Dasychirana **gen. n.** *Lymantriidae* p. 550, *obliquilinea*, *unilineata*, *crenulata*, p. 551, **spp. n.**, Trop. Africa, BETHUNE-BAKER Ann. Nat. Hist. 7.

Dasylophia nigrescens p. 264, *placida*, *indecoris*, p. 265, *angustipennis* p. 266, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*D. saturata* Colombie, *obscura*, p. 19, *ligea* Parana p. 20, DOGNIN Hét. nouv. 2.

Datana neomexicana **sp. n.** New Mexico, DOLL Ent. News 22 p. 300.

Deilemera albofasciata, *fractifascia*, **spp. n.**, Formosa, WILEMAN p. 31 Entomologist 44.

Delphyre pyroperas **sp. n.** Brazil, HAMPSON p. 396 Ann. Nat. Hist. 8.

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Deroca arizana **sp. n.** Formosa, WILEMAN p. 149 Entomologist 44.—*D. hyalina* var. n. *subhyalina* India, STRAND Seitz Gr.-Schm. pal. Div. p. 203.

Desmotricha n. n. for *Trichodesma* H., HAMPSON p. 396 Ann. Nat. Hist. 8.

Diacrisia nyasica **sp. n.** Africa p. 409, *neurica* n. n. (= *Maenas venosa* H.) p. 408, HAMPSON T.c.—*D. sanio*, Eier, RICHTER Polyxena Wien 5 p. 33.

Dialithoptera stellata **sp. n.** Japan p. 193 pl. xxx f. 26, WILEMAN Tr. Ent. Soc. London 1911.

Diarhabdosia coroides p. 368, *melinda* p. 369, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Dicentria luciniosa larva p. 231, DYAR Proc. Ent. Soc. Washington 13.—*D. patula*, *missilis*, p. 268, *rivalis*, *rustica*, p. 269, *tacita*, *limosoides*, p. 270, **spp. n.**, Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*D. klagesi* **sp. n.** Trinidad, DRUCE p. 143 Ann. Nat. Hist. 8.—*D. claricostata* Guyane **sp. n.**, DOGNIN p. 26 Hét. nouv. 2.

Dicladia vitrina sp. n. S. America, ROTHSCHILD p. 37 Nov. Zool. 18.

Dicogaster gen. n. type *Gloveria coronada* p. 15 pl. iv ff. 1, 4 & 6, BARNES & McDUNNOUGH Cont. Nat. Hist. Lep. N. Amer. 1 No. 2.

Dictyoploca gen. n. near *Caligula*, JORDAN Seitz Gr.-Schm. pal. Div. p. 218.

Dieida gen. n. Zygaenidae, *persa* sp. n. Persia, STRAND p. 162 Zs. wiss. Insektbiol. 7.

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Digglesia gen. n. Lasiocampidae, *crocota* sp. n., Cardwell, TURNER p. 86 Ann. Queensland Mus. 10.

Diptilon aurantiipes, *hoffmannsi*, spp. n., S. America, ROTHSCHILD p. 42 Nov. zool. 18.—*D. flavipalpis* sp. n. Argentina, HAMPSON p. 395 Ann. Nat. Hist. 8.

Dirphia horcana sp. n. Costa Rica, SCHAUS p. 622 Ann. Nat. Hist. 7.—*D. alba* sp. n. Ecuador, DRUCE p. 719 Ann. Nat. Hist. 8.

Doa raspa larva p. 230, DYAR Proc. Ent. Soc. Washington 13.

Dolichesia gen. n. Lithosiinae, *falsimonia* sp. n. Costa Rica, SCHAUS p. 362 Ann. Nat. Hist. 7.

Dorapteryx zopheropa sp. n. Uganda, BETHUNE-BAKER p. 573 Ann. Nat. Hist. 7.

Dottia gen. n. Notodontidae, *effecta* sp. n. Costa Rica, SCHAUS p. 621 Ann. Nat. Hist. 7.

Drepana falcataria ab. n. *crassistrigaria*, *curvatula* f. n. *japonibia*, *binaria* ff. n. *liliputaria* and *oranaria*, *grisearipennis* n. n. für *grisearia* Leech, *argenteola* ab. n. *simplificaria*, STRAND Seitz Gr.-Schm. pal. Div. pp. 199–202.

Drugera mimica sp. n. Colombia, DRUCE p. 142 Ann. Nat. Hist. 8.

Dryocampa inversa sp. n. Argentina, *bilineata* var., GIACOMELLI p. 34 An. Soc. Argentina 72.

Dylomia diversa Amérique sud sp. n., DOGNIN p. 40 Hét. nouv. 2.

Ecdemus obscuratum sp. n. Costa Rica, SCHAUS p. 180 Ann. Nat. Hist. 7.

Ecpantheria perplexa sp. n. Costa Rica, SCHAUS p. 186 T.c.

Edwardsimenna type *jalapae* p. 15, BARNES & McDUNNOUGH Cont. Nat. Hist. Lep. N. Amer. 1 No. 2.

Elysium aeschista Amérique du sud sp. n., DOGNIN p. 10 Hét. nouv. 3.

Endrosa roscida melanomos ab. n. *fumosa*, SCHWINGENSCHUSS Verh. Zool.-Bot. Ges. Wien 61 p. (181).—*E. aurita*, Schallapparatus, PETER Greifswald Mitt. Ver. 42 pp. 24–31.

Eosia gen. n. Saturniidae, *insignis* sp. n., LE CERF p. 307 Bull. Mus. Paris 1911.

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Epidonta gen. n. Notodontidae p. 555, *eroki* sp. n. Trop. Africa p. 556, BETHUNE-BAKER T.c.

Epiperola grandiosa Guyane, *vafinsa*, p. 62, *flexilinea* p. 63, Colombie, spp. n., DOGNIN Hét. nouv. 3.

Epiphora bauhiniae, Puppe, SAGEDER Ent. Zs. 25 p. 130.

Episcepsis hamponi p. 43, *klagesi*, *sordidus*, *ockendeni*, *littoralis*, *scintillans*, S. America, *dominicensis* W. Indies, p. 44, spp. n., ROTHSCHILD Nov. zool. 18.—*E. capyscoides* Guyane sp. n., DOGNIN p. 10 Hét. nouv. 2.

Eragisa fassli San Antonio sp. n., DOGNIN p. 18 Hét. nouv. 2.

Eressades gen. n. Syntomidae, *flavipunctata* sp. n. Angola, BETHUNE-BAKER p. 531 Ann. Nat. Hist. 7.

Eriogaster lanestris, Formen in Norwegen, SCHØYEN Nyt Mag. Naturv. Kristiania 49 pp. 53–63 pl. iii; var. *arbusculae* Norwegen Imago, VRET-LIND Entomol. Tidskr. 32 pp. 86–90.

Eriogyna gen. n. near *Saturnia*, *pyretorum* subsp. n. *cognata*, *luctifera* China, JORDAN Seitz Gr.-Schm. pal. Div. p. 221.

Euagra delectans sp. n. Costa Rica, SCHAUS p. 612 Ann. Nat. Hist. 7.

Eucereon relegatum sp. n. Costa Rica, SCHAUS p. 182 T.c.—*E. pyrozone* sp. n. S. America, HAMPSON p. 396 Ann. Nat. Hist. 8.—*E. flavopunctatum* Colombie sp. n., DOGNIN p. 12 Hét. nouv. 2.—

E. patula Perou **sp. n.**, DOGNIN p. 5 op. cit. 3.

Euchaetias albicosta, larva p. 229, DYAR Proc. Ent. Soc. Washington 13.

Euchromia jacksoni **sp. n.** Uganda, BETHUNE-BAKER p. 531 Ann. Nat. Hist. 7.—*E. brilliantina* Buru, *wahnesi* New Guinea, **spp. n.**, *neglecta neglecta* and *n. occidentalis*, subsp. n., ROTH-SCHILD p. 38 Nov. Zool. 18.

Euclea lamora, *aethes*, **spp. n.**, Colombie, DOGNIN p. 61 Hét. nouv. 3.—*E. phara*, *parva*, *flexilinea*, *assimilis*, *columbiana*, not *Sisyrosee*, DYAR Proc. Ent. Soc. Washington 13 p. 106.

Euycane meres **sp. n.** Colombia, DRUCE p. 288 Ann. Nat. Hist. 7.

Eudia **gen. n.** für *Saturnia pavonia*, JORDAN Seitz Gr.-Schm. pal. Div. p. 222.

Eugivira saladota, *ornata*, Amérique sud, **spp. n.**, DOGNIN p. 55 Hét. nouv. 2.

Eugoa sexpuncta **sp. n.** New Guinea, HAMPSON p. 306 Ann. Nat. Hist. 8.

Eumenogaster affinis **sp. n.** Venezuela, ROTH-SCHILD p. 42 Nov. Zool. 18.—*E. nigricauda* Guyane **sp. n.**, DOGNIN p. 9 Hét. nouv. 2.

Eumela junodis, CONTE & VANEY Lab. étud. soie Lyon 14 pp. 123–125 av. fig.

Eunomia caymanensis **sp. n.** Georgetown, HAMPSON p. 395 Ann. Nat. Hist. 8.

Eupharpyia schrottkyi Paraguay **sp. n.**, DOGNIN p. 39 Hét. nouv. 2.

Euphastia **gen. n.**, *Notodontidae*, *ophidera* **sp. n.**, p. 35, Guyane, DOGNIN p. 35 T.c.

Euprepia caligans powelli n. var. *powelli-punctata* and *powelli-haroldi*, varr. n., p. 161 pl. xiii, *E. cribraria* var. n. *anglica*, *nevadensis*, *rondoui*, *leucomelas*, *carigalensis*, and *vernetensis*, varr. n., pp. 171–180 pl. lxxx, OBERTHÜR Et. Lap. comp.

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Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*H. colombiana* sp. n. Tolima, ROTHSCHILD p. 158 Nov. Zool. 18.—*H. fassli* Colombie sp. n., DOGNIN p. 11 Hét. nouv. 3.—*H. cinctipes* Cuba, Florida, DYAR Proc. Ent. Soc. Washington 13 p. 10.

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Hemileuca, *minette*, p. 7, *marillia* p. 9, spp. n., Mexico, DYAR Proc. Ent. Soc. Washington 13.

Hemipecten gaudeator p. 628, *alfuræ* p. 269, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

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Hyalurga grandis p. 288, *whiteleyi* p. 289, spp. n., Peru, DRUCE Ann. Nat. Hist. 7.—*H. cinctella* sp. n. Ecuador, STRAND p. 42 Fauna exotica 1.

Hylesia dalina p. 622, *rubrifrons*, *rufipes*, p. 623, *umbrata*, *frigida*, p. 624, *annulata*, *rosacea*, *hamata*, p. 625, spp. n., Costa Rica, SCHAUUS Ann. Nat. Hist. 7.

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Hypomolis fassli sp. n. Colombia, ROTHSCHILD p. 158 Nov. Zool. 18.—*H. rothschildi* Colombie sp. n., DOGNIN p. 16 Hét. nouv. 2.

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Jana rustica O.-Africa, *propinquestriata* Kamerun, spp. n., STRAND p. 295 Mitt. Mus. Berlin 5.

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Laelia infracta p. 547, *flava* p. 548, spp. n., W. Africa, BETHUNE-BAKER T.c.—*L. costalis* sp. n. Formosa, MATSUMURA p. 139 Mem. Soc. ent. Belgique 18.—*L. coenosa* ab. n. *paucipuncta* Yokohama, *japonibia* sp. n. Japan, STRAND Seitz Gr.-Schm. pal. Div. p. 122.

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(N-9186 j)

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Loxophlebia egregia sp. n. Costa Rica, SCHAUS p. 174 Ann. Nat. Hist. 7.—*L. klagesi*, *rufescens*, p. 29, *cosmosomoides*, *semiflava*, p. 30, spp. n., S. America, ROTHSCCHILD Nov. Zool. 18.—*L. inconspicua* Guiana, *fininigra* Brazil, spp. n., KAYE p. 145 Entomologist 44.—*L. socorrensis* Colombie p. 4, *crusmatica* Guyane p. 5, spp. n., DOGNIN Hét. nouv. 2.—*L. metamela* Amérique du sud sp. n., DOGNIN p. 3 op. cit. 3.

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d 28–2

Macrocneme semiviridis sp. n. Colombia, DRUCE p. 287 Ann. Nat. Hist. 7.—*M. guyanensis* Guyane sp. n., DOGNIN p. 6 Hét. nouv. 2.

Macropectra rosea, hieroglyphica, spp. n., Angola, BETHUNE-BAKER p. 569 Ann. Nat. Hist. 7.

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Mesothen temperata p. 174, *montana, ethela*, p. 175, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*M. doris*

sp. n. Colombia, DRUCE p. 138 Ann. Nat. Hist. 8.—*M. dorsimacula* sp. n. Costa Rica, ROTHCHILD p. 45 Nov. Zool. 18.—*M. perflaxa* sp. n. Brazil, KAYE p. 145 Entomologist 44.

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Naclia alluaudi pl. xvi fig. 6, *luctuosa* fig. 4, *moerens* fig. 3, p. 467, spp. n., OBERTHÜR Ann. Soc. ent. France 79.—*N. maria* p. 94 pl. x figs. 6–7, *marietta* p. 95 fig. 8, spp. n., OBERTHÜR Et. Lep. comp. fasc. 3.

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Eriopus dapsilis, *carmidi*, spp. n., Costa Rica, SCHAUS p. 98 Ann. Nat. Hist. 8.—*E. thermochroa* p. 432, *nana*, *cyanopera*, p. 433, spp. n., Nigeria, HAMPSON Ann. Nat. Hist. 8.—*E. duplicans* ab. n. *rubrivena* Japan, WARREN Seitz Gr.-Schm. pal. Div. p. 195.

Eriopyga grandis ab. n. *bicolor*, WILEMAN p. 199 Tr. Ent. Soc. London 1911.—*E. duruscula* p. 33, *rubicundula*, *evanida*, *volcania*, p. 34, *turrialba*, *renalba*, p. 35, *cachia*, *poasina*, p. 36, *cartagensis*, *limonis*, p. 37, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*E. moneti* sp. n. Costa Rica, SCHAUS p. 92 Ann. Nat. Hist. 8.—*E. euchroa* p. 422, *prasinospila* p. 423, spp. n., Colombia, HAMPSON Ann. Nat. Hist. 8.

Ethiopica exolivia sp. n. Nigeria, HAMPSON p. 438 Ann. Nat. Hist. 8.—*E. melanopa*, *leucostigmata*, *apicestriata*, spp. n., W. Africa, BETHUNE-BAKER p. 512 Ann. Nat. Hist. 8.

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Eublemmara gen. n. p. 521, *tandoana* sp. n. Angola p. 522, BETHUNE-BAKER T.c.

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Eustrotia obliquilinea sp. n. Costa Rica, SCHAUS p. 210 Ann. Nat. Hist. 8.—*E. loxosema, cumalineae*, p. 523, *bella* p. 524, spp. n., Africa, BETHUNE-BAKER Ann. Nat. Hist. 8.—*E. antonita, santarita*, spp. n., Texas, DYAR p. 68 Proc. Ent. Soc. Washington 13.

Eutelia albisecta sp. n. Tucuman, DOGNIN p. 152 Mem. Soc. ent. Belgique 18.—*E. malanga, adoxodes*, spp. n., W. Africa, BETHUNE-BAKER p. 526 Ann. Nat. Hist. 8.

Euxenistis gen. n. near *Blepharidia* Püng., Typus *E. amicina* Stgr., WARREN Seitz Gr.-Schm. pal. Div. p. 140.

Euxoa capsensis sp. n., CHRÉTIEN p. 497 Ann. Soc. ent. France 79.—*E. cartagensis* sp. n. Costa Rica, SCHAUS p. 90 Ann. Nat. Hist. 8.

Exua barzillai sp. n. Costa Rica, SCHAUS p. 227 T.c.

Focilla proba p. 71, *pallidipes, subignaris*, p. 72, *terraba* p. 73, *perplexa, inconstans*, p. 74, *vulgaris, nescia*, p. 75, *onusta* p. 76, *determina, taloides*, p. 77, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*F. invidirosa* sp. n. Costa Rica, SCHAUS p. 229 Ann. Nat. Hist. 8.

Gelastocera duplicata p. 234, *G. ? insignita* p. 235, spp. n., Japan, WILEMAN Tr. Ent. Soc. London 1911.

Gerbathodes gen. n. für *angusta* Btlr., WARREN Seitz Gr.-Schm. pal. Div. p. 175.

Gigantoceras adoxodes sp. n. Angola, BETHUNE-BAKER p. 527 Ann. Nat. Hist. 8.

Glenoptera ornata sp. n. Costa Rica, SCHAUS p. 230 Ann. Nat. Hist. 8.

Gonodes netopha sp. n. Costa Rica, SCHAUS p. 105 T.c.

Gonodonta pulverea, sitia, avangareza, p. 83, *lecha* p. 84, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Gortynodes gen. n. p. 512, *holophaea* sp. n. W. Africa p. 513, BETHUNE-BAKER Ann. Nat. Hist. 8.

Graphigona ? magnifica sp. n. Costa Rica, SCHAUS p. 190 Ann. Nat. Hist. 7.

Grotella olivacea sp. n. New Mexico p. 152, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

Gyroprora gen. n. *Cucullianae, ochrias* sp. n. Melbourne, TURNER p. 64, Ann. Queensland Mus. 10.

Gyrtona mediolineata sp. n. New Guinea, BETHUNE-BAKER p. 543 Ann. Nat. Hist. 8.

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Herminia gigantea sp. n. Sardinia, fig. 2A, TURATI p. 290 Paris Bul. soc. ent. 1911.—*H. zammodia* sp. n. Angola, BETHUNE-BAKER p. 539 Ann. Nat. Hist. 8.

Hermonassa oleographa sp. n. India, HAMPSON p. 416 Ann. Nat. Hist. 8.

Herminodes juvenis, subclara, p. 219, *valida, madrina*, p. 220, *H. ? venosa* p. 221, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.

Heterochroma viridipicta p. 40, *exundata, ligata*, p. 41, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*H. thermocla* sp. n. Colombia, HAMPSON p. 430 Ann. Nat. Hist. 8.

Heterogramma stenoptera sp. n. W. Africa, BETHUNE-BAKER p. 540 Ann. Nat. Hist. 8.

Heteromma gen. n. für *alpigena* Bsd., WARREN Seitz Gr.-Schm. pal. Div. p. 180.

Heteropygas angulum p. 36, *dognini* with ab. *pallida* p. 37, spp. n., Argentina, GIACOMELLI An. Soc. Argentina 72.

Homodes haemorrhanta sp. n. Lagos, BETHUNE-BAKER p. 539 Ann. Nat. Hist. 7.

Homohadena rustica sp. n. Arizona p. 157, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

Hoplotarache nephele sp. n. Usagara, HAMPSON p. 445 Ann. Nat. Hist. 8.

Hyalobole gen. n. near *Elwesia* p. 141, *orthosioides* sp. n. Darjiling p. 142, WARREN Nov. Zool. 18.

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Hypoplexia melanica sp. n. Transvaal, HAMPSON p. 432 Ann. Nat. Hist. 8.

Hyppa rectilinea, Zucht, HARTWIG Ent. Zs. Frankfurt 25 p. 35.

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Iluza egarsia sp. n. W. Africa, BETHUNE-BAKER p. 532 Ann. Nat. Hist. 8.

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Leioselia gen. n. near *Miselia* p. 94, *egregia* sp. n. Costa Rica p. 95, SCHAUS Ann. Nat. Hist. 8.

Letis albociliata p. 187, *tuisana* p. 188, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

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(N-9186 j)

L. epiastrea Makara sp. n., MEYRICK p. 58 Tr. N. Zeal. Inst. 43; early stages, SUNLEY p. 129 Tr. N. Zeal. Inst. 43.—*L. lissoxylla* New Zealand sp. n., MEYRICK p. 70 T.c.

Leucophanera argyrozona Guinea sp. n. p. 117, JOANNIS Bull. Soc. ent. France 1911.

Lithacodia veternosa, *homopteridia*, p. 209, *jora* p. 210, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.

Lophomyra gen. n. near *Xylomyges*, *tacita* sp. n. Costa Rica, SCHAUS p. 99 T.c.

Lophoptera semirufa sp. n. W. Africa, DRUCE p. 719 Ann. Nat. Hist. 8.

Lophotagonia gen. n. *Sarrothripinae* p. 527, *bostrycodes* sp. n. W. Africa p. 528, BETHUNE-BAKER Ann. Nat. Hist. 8.

Luperina dumerilii ab. n. *uniformis* Europa p. 185, *ferrago* ab. n. *obsoleta* Turkestan p. 186, WARREN Seitz Gr.-Schm. pal. Div.—*L. gueneei*, TURNER p. 53 etc. pls. iii etc. Ent. Rec. 23; PORRITT p. 204 pl. iii f. 4 Ent. Mag. 47.—*L. testacea*, *gueneei*, males, etc., PIERCE Rep. Lancashire ent. Soc. 33 p. 37 pl. vii & p. 269 Ent. Rec. 23.

Lycangesia hatila sp. n. Costa Rica, SCHAUS p. 111 Ann. Nat. Hist. 8.

Lycophotia atrisigna Natal p. 418, *viridis* Nigeria p. 419, spp. n., HAMPSON Ann. Nat. Hist. 8.

Lygranthoecia carolinensis sp. n. North Carolina p. 152, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

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Metasada fuliginaria sp. n. W. Africa, BETHUNE-BAKER p. 522 Ann. Nat. Hist. 8.

Micragrotis nigrisigna sp. n. Centr. Africa, HAMPSON p. 415 Ann. Nat. Hist. 8.—*M. cinerosa* sp. n. Nairobi, BETHUNE-BAKER p. 508 Ann. Nat. Hist. 8.

Micrantha mollita sp. n. Costa Rica, SCHAUS p. 208 Ann. Nat. Hist. 8.

Mictochroa dolens p. 114, *ambigua* p. 115, spp. n., Costa Rica, SCHAUS T.c.

Miselia umbrata p. 93, *albimixta* p. 94, spp. n., Costa Rica, SCHAUS T.c.—*M. albipuncta* sp. n. Peru p. 420, *meyricci* n. n. for *pictula* Meyr. p. 421, HAMPSON Ann. Nat. Hist. 8.

Moma champva var. n. *ainu*, WILEMAN p. 242 Tr. Ent. Soc. London 1911.

Monima constabilis sp. n. Japan, WILEMAN p. 394 T.c.—*M. caloramica*, *hepatica*, p. 156, *agravens* p. 157, spp. n., U.S., BARNES & McDUNNOUGH J. New York Ent. Soc. 19.—*M. revicta*, life-history, GIBSON p. 157 Canad. Ent. 43.

Monodes medioclara sp. n. Costa Rica, SCHAUS p. 43 Ann. Nat. Hist. 7.—*M. perigeana*, *delenifica*, *renipes*, p. 100, *optata* p. 101, *cohaerens*, *malaca*, p. 102, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.

Morrisonia chlorodonta p. 423, *oliveri* p. 424, spp. n., New Zealand, HAMPSON Ann. Nat. Hist. 8.—*M. praesignis* Orepuki, *longstaffii* Dunedin, spp. n., HOWES p. 128 Tr. N. Zeal. Inst. 43.

Naarda unipunctata sp. n. Lokoja, BETHUNE-BAKER p. 540 Ann. Nat. Hist. 8.

Nagadeba treicegcroma sp. n. Nairobi, BETHUNE-BAKER p. 537 T.c.

Neocodia gen. n., *asna* sp. n. Costa Rica, SCHAUS p. 117 Ann. Nat. Hist. 8.

Neolita adin sp. n. Costa Rica, SCHAUS p. 107 T.c.

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Neptunia gen. n. type *Azenia pulchra* p. 159, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

Neuranethes gen. n. *Hadeninae* p. 508, *angola* sp. n. Africa p. 509, BETHUNE-BAKER Ann. Nat. Hist. 8.

Nodaria obliqua p. 255 pl. xxxi f. 15, *parallela* f. 16, *assimilata* f. 11, p. 256, spp. n., Japan, WILEMAN Tr. Ent. Soc. London 1911.—*N. melanopa*, *parallela*, spp. n., W. Africa, BETHUNE-BAKER p. 537 Ann. Nat. Hist. 8.

Nonagria? *obscura* sp. n. Japan, WILEMAN p. 223 Tr. Ent. Soc. London 1911.—*N. neurica*, early stages, EDELSTEN p. 206 pl. iiiia Ent. Mag. 47.

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Obroatis vinea sp. n. Costa Rica, SCHAUS p. 228 Ann. Nat. Hist. 8.

Ogdoconta pulverulenta, *pulvilinea*, spp. n., Costa Rica, SCHAUS p. 44 Ann. Nat. Hist. 7.

Oligia parathermes sp. n. Uganda, BETHUNE-BAKER p. 510 Ann. Nat. Hist. 8.—*O. strigilis* abb. n. *suffumata*, *ferrea* [loc.] p. 172, *O. literosa* ab. n. *constricta* [loc. ?], *O. bicoloria* abb. n. *unicolor* [loc. ?], *longistriata* Spanien, p. 173, WARREN Seitz Gr.-Schm. pal. Div.

Ophisma nobilis p. 62, *fulvipuncta*, *O. ?esperanza*, p. 63, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Oraesia striolata sp. n. Costa Rica, SCHAUS p. 81 T.c.—*O. subucula* sp. n. Paraguay, DOGNIN p. 154 Mem. Soc. ent. Belgique 18.

Orbona fragariae f. n. *pallidior*, WARREN Seitz Gr.-Schm. pal. Div. p. 145.

Oroscopta delicata, *calverti*, p. 224, *hacupha* p. 225, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.

Orrhodia erythrocephala unicolor ab. n. p. 482, *vaccinii nigra* var. n., *flavo-fasciata* ab. n., p. 483, LUCAS Ann. Soc. ent. France 79.—*O. torrida* ab. n., *amaura*, SCHAWERDA Verh. ZoolBot. Ges. Wien 61 p. 80.

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Orthogonia sera abb. n. *purpurata*, *carneata*, *obscurata* and *lilacina*, Japan and China, *plana* abb. n. *semigrisea*, *suffusa*, *canimaculata* sp. n., *grisea* ab. *plenifasciata*, China, WARREN Seitz Gr.-Schm. pal. Div. pp. 161-162.

Orthogramma terranea sp. n. Costa Rica, SCHAUS p. 229 Ann. Nat. Hist. 8.

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Ozarba reussi sp. n. Daressalam, STRAND Wien Ent. Ztg. 30 p. 225.—*O. agraria* sp. n. Costa Rica, SCHAUS p. 115 Ann. Nat. Hist. 8.—*O. epimochla* sp. n. Lokoja, BETHUNE-BAKER p. 523 Ann. Nat. Hist. 8.

Paectes phaeoplaga, *haematosema*, p. 43, *eumicta*, *endochlora*, p. 44, spp. n., French Guiana, SCHAUS Proc. Ent. Soc. Washington 13.—*P. curvilinea* sp. n. Costa Rica, SCHAUS p. 49 Ann. Nat. Hist. 7.—*P. chrysoplaga* sp. n. Peru, DRUCE p. 149 Ann. Nat. Hist. 8.

Palindia albistriga p. 58, *delecta* p. 59, *affinis*, *austrina*, p. 60, *folium* p. 61, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

Palpangula sabouradi pl. xviii f. 6 p. 484, LUCAS Ann. Soc. ent. France 79.

Papaipema; *erubescens* p. 39, *moeseri* p. 42, spp. n., N. America, also various notes pp. 37-47, BIRD Canad. Ent. 43.

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(N-2186 j)

Parangitia temperata, *guanacaste*, spp. n., Costa Rica, SCHAUS p. 112 Ann. Nat. Hist. 8.

Parasiopsis gen. n. *Deltoidinae* p. 536, *arcuata* sp. n. Angola p. 537, BETHUNE-BAKER Ann. Nat. Hist. 8.

Parastichtis rurea ab. n. *uniformis* Turkestan, *P. funerea* subsp. n. *oriens*, *brunneata*, Japan, p. 165, *P. lateritia* abb. n. *derufata* [loc. ?], *festiva* Transkaukasien, *sordida* Italia, p. 166, *P. sordida* ab. n. *mediana* Deutschl. p. 167, *P. conciliata* ab. n. *fuscata* Japan, *P. unanimis* abb. n. *fasciata*, *rufithorax*, *semiochrea* [loc. ?], p. 168, *P. scolopacina* ab. n. *subbrunnea*, *P. cuneata* ab. n. *semirufa*, Japan, p. 170, *secalis* abb. n. *pulverosa* Ital. and *lilacina* Engadin p. 171, WARREN Seitz Gr.-Schm. pal. Div.

Parathermes acutissima sp. n. W. Africa, BETHUNE-BAKER p. 536 Ann. Nat. Hist. 8.

Pareuxplexia gen. n. near *Lasiplexia*, *pallidimargo* sp. n. India, WARREN Seitz Gr.-Schm. pal. Div. p. 187.—*P. ruficosta* p. 142, *flammiifera*, *nigritula*, *dissimulans*, p. 143, *humilis*, *rustistigma* with ab. *ochreistigma*, *quadripuncta*, p. 144, *P. ? nitida* p. 145, spp. n., India, WARREN Nov. Zool. 18.

Paromphale chioneophra sp. n. Rhodesia, HAMPSON p. 439 Ann. Nat. Hist. 8.

Perciana taiwana sp. n. Formosa, WILEMAN p. 175 Entomologist 44.

Perigea funerea p. 103, *summota*, *illicita*, p. 104, *aeruginosa* p. 105, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.—*P. micragalla* Peru p. 430, *pyrocausta* Colombia p. 421, spp. n., HAMPSON Ann. Nat. Hist. 8.—*P. aplecta* sp. n. Angola, BETHUNE-BAKER p. 510 Ann. Nat. Hist. 8.—*P. andrena* sp. n. California p. 135, SMITH J. New York Ent. Soc. 19.

Perigonica eldana p. 143, *fermata* p. 144, spp. n., U.S., SMITH T.c.

Petilampa homora sp. n. Nairobi, BETHUNE-BAKER p. 511 Ann. Nat. Hist. 8.

Phaioecia gen. n. type *Cirrhophanus duplicatus*, DYAR Proc. Ent. Soc. Washington 13 p. 69.

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Phragmatiphila connexa sp. n. Angola, BETHUNE-BAKER p. 517 Ann. Nat. Hist. 8.

Phuphena multilinea, zelotypa, spp. n., Costa Rica, SCHAUS p. 42 Ann. Nat. Hist. 7.

Pleonectyptera serena sp. n. California p. 149, SMITH J. New York Ent. Soc. 19.

Plothia ianthina sp. n. W. Africa, BETHUNE-BAKER p. 527 Ann. Nat. Hist. 8.

Plusia limata p. 50, *meretricia* p. 51, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.—*P. atrata* sp. n. Argentina p. 38, GIACOMELLI An. Soc. Argentina 72.—*P. gamma* ab. n. *alepica*, NITSCHKE Verh. Z.-B. Ges. Wien 61 p. 51; biologia, parassiti, SILVESTRI Boll. Lab. Zool. Portici 5 pp. 287-319 26 figs.

Plusiodonta nitissima, miranda, spp. n., Costa Rica, SCHAUS p. 82 Ann. Nat. Hist. 7.—*P. aborta* sp. n. Colombia, DOGNIN p. 156 Mem. Soc. ent. Belgique 18.

Polia ornatissima sp. n. Formosa, WILEMAN p. 175 Entomologist 44.—*P. (Mamestra) basivirida* p. 154, *hanhami* p. 155, spp. n., N. America, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.—*P. albostrigata* sp. n. Peru, DRUCE p. 719 Ann. Nat. Hist. 8.—*P. xanthomista* ab. n. *styriaca* Österreich, HOFFMANN p. 189 Ent. Rdsch. 28.—*P. philippi*, RANGNOW Intern. ent. Zs. Guben 4 p. 231.—*P. suda* var. n. *schimae*, SCHAWERDA Verh. ZoolBot. Ges. Wien 61 p. 80.

Polyphaenis albibasis sp. n. Spanien, WARREN Seitz Gr.-Schm. pal. Div. p. 198.

Prochloridea gen. n., *modesta* sp. n. New Mexico, p. 153, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

Prodenia metriodes sp. n. Nigeria, BETHUNE-BAKER p. 511 Ann. Nat. Hist. 8.—*P. littoralis*, SEITZ Ent. Zs. 24 p. 266.

Polymnia gen. n. near *Callyna* p. 440, *viola, atrifera*, spp. n., W. Africa, HAMPSON Ann. Nat. Hist. 8.

Proroblemma rosea sp. n. Costa Rica, SCHAUS p. 108 Ann. Nat. Hist. 8.

Protagrotis obscura sp. n. Nevada p. 154, BARNES & McDUNNOUGH J. New York Ent. Soc. 19.

Pucialia rectilinea, chlorographa, spp. n., Guiana, DOGNIN p. 153 Mem. Soc. ent. Belgique 18.

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Rhanidophora flava sp. n. Uganda, BETHUNE-BAKER p. 538 Ann. Nat. Hist. 7.

Rhosologia atomosa p. 218, *pallida* p. 219, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.

Rhynchina paliscia sp. n. Lokoja, BETHUNE-BAKER p. 539 Ann. Nat. Hist. 8.

Rivula angulata p. 267, *confusa, nigripunctalis*, p. 268, *curvilinea* pl. xxxi f. 18, *errabunda*, p. 269, spp. n., Japan, WILEMAN Tr. Ent. Soc. London 1911.

Rivulana gen. n. *Catocalinae* p. 532, *ochrea* sp. n. Angola p. 533, BETHUNE-BAKER Ann. Nat. Hist. 8.

Safia minor, abscisa, p. 54, *permixta* p. 55, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 7.

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punctata, *nigronotaria*, *fulvipicta*, p. 296,
tripartaria p. 314, *fucataria*, *undularia*,
p. 315, *argillacearia* p. 316, *decrepitata*,
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WILEMAN p. 30 Entomologist 44.—*A.*
lenticinosaria sp. n. Formosa, WILEMAN
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sp. n. Colombia, *scintillans* ab. n. *pleni-*

fasciata, p. 163, *insignata* ab. n. *liposema*, *ruficeps* ab. n. *incerta*, p. 164, DOGNIN Mem. Soc. ent. Belgique 18.—*A. aequalipunctata major*, *radiata dulcicola*, varr. n., DOGNIN p. 24 Hét. nouv. 3.

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Certima subcaliginosa p. 42, *straminea*, *subfalvata*, p. 43, Colombie, spp. n., DOGNIN Hét. nouv. 3.—*C. minorata* p. 181, *versiplaga* p. 182, spp. n., S. America, DOGNIN Mem. Soc. ent. Belgique 18.

Chaetoceras lactifera sp. n. Colombia, DOGNIN p. 187 Mem. Soc. ent. Belgique 18.—*C. versicolor* Colombie sp. n., DOGNIN p. 57 Hét. nouv. 3.

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Clysia sargentaria sp. n. p. 49 pl. xcvi fig. 945, OBERTHÜR Et. Lep. comp. fasc. 5.

Cnephora cana Equateur p. 50, with ab. n. *subochrea* p. 51, *subfumata* Argentine p. 51 with ab. n. *fulvitincta* p. 52, spp. n., DOGNIN Hét. nouv. 3.

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Erebochlora ovaliplaga sp. n. Colombia p. 165, *orbisticta* ab. n. *subtermaculata* p. 166, DOGNIN Mem. Soc. ent. Belgique 18.—*E. regularis* p. 15, *fusimacula*, *roseofasciata*, p. 16, Colombie, spp. n., DOGNIN Hét. nouv. 4.—*E. orbifera* sp. n. Peru, BASTELBERGER p. 157 Int. ent. Zs. 5.

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Formosa, WILEMAN p. 272 Entomolo-
gist 44.

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DOGNIN p. 164 Mem. Soc. ent. Belgique
18.

Hemithea eluta sp. n. Japan, WILE-
MAN p. 337 Tr. Ent. Soc. London 1911.

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DOGNIN p. 185 Mem. Soc. ent. Bel-
gique 18.

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SCHAUS p. 586 Ann. Nat. Hist. 8.

Heteroleuca rubescens Colombie sp. n.,
DOGNIN p. 35 Hét. nouv. 3.

Heterolocha subroseata abb. n. *nigri-
puncta*, *subviolacea* and *ferruginata*, For-
mosa, BASTELBERGER p. 23 Int. ent. Zs.
4.

Heterusia declivis p. 29, *costigutta* p.
30, Amérique du sud, spp. n., DOGNIN
Hét. nouv. 3.—*H. obtusa* Bogota p. 18,
subvermiculata Colombie p. 19, spp. n.,
DOGNIN Hét. nouv. 4.—*H. tentaculifera*
sp. n. Colombia p. 174, *creusa* ab. n.
albidior p. 175, DOGNIN Mem. Soc. ent.
Belgique 18.—*H. fidonioides*, *pyriformis*,
spp. n., Peru, BASTELBERGER p. 149
Int. ent. Zs. 5.—*H. taiwana* n. n. for
formosana, WILEMAN p. 362 Entomolo-
gist 44.

Hirasa flavipicta sp. n. Formosa,
WILEMAN p. 343 Entomologist 44.

Homidia gen. n. near *Corodinia* p.
635, *insolita* loc. inc. p. 642, *leucothy-
sanota* Bolivia p. 643, *tangens* p. 645,
restructa Ecuador, *tractata* Bolivia, p.
646, spp. n., STRAND D. ent. Zs. 1911.

Hydata elegans sp. n. Peru, BASTEL-
BERGER p. 54 Int. ent. Zs. 5.

Hydrelia rubrivena sp. n. Formosa,
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ulula* sp. n. Formosa, BASTELBERGER
p. 90 Soc. entomol. 25.

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of N. American, SWETT pp. 73–82 Canad.
Ent. 43.—*H. nivocellata*, *jaenaria*,
spp. n., Formosa, BASTELBERGER p. 241
Int. ent. Zs. 4.—*H. lithurga* Makara
sp. n., MEYRICK p. 71 Tr. N. Zeal. Inst.

43.—*H. mediodentata* sp. n. Arizona p.
160, BARNES and MCDUNNOUGH J.
New York Ent. Soc. 19.

Hygrochroa vitellinata pl. xci fig. 890,
paulinaria fig. 891, *miraria* pl. xcii fig.
906, *leonidaria* fig. 898, *noyalidaria*
fig. 899, spp. n., p. 47, OBERTHÜR Et.
Lep. comp. fasc. 5.—*H. parva*, distinct,
WILEMAN p. 303 Tr. Ent. Soc. London
1911.

Hypographa bathrosema sp. n. W.
Australia, PROUT p. 702 Ann. Nat.
Hist. 8.

Hypolepis tenuinota, *albifascia*, p. 27,
intersecta p. 28, Colombie, spp. n.,
DOGNIN Hét. nouv. 3.—*H. crassinata*
Colombie sp. n., DOGNIN p. 17 Hét.
nouv. 4.

Hyposidra muscula sp. n. Formosa,
BASTELBERGER p. 249 Int. ent. Zs. 4.

Ira subdentilinea sp. n. Peru, DOGNIN
p. 181 Mem. Soc. ent. Belgique 18.—
I. fulva Colombie sp. n., DOGNIN p. 42
Hét. nouv. 3.—*I. prouti* sp. n. Argentina
p. 38, GIACOMELLI An. Soc. Argentina
72.

Iridopsis obliquata ab. n. *subnotata*,
DOGNIN p. 177 Mem. Soc. ent. Belgique
18.—*I. cinerascens* Colombie sp. n.,
DOGNIN p. 35 Hét. nouv. 3.

Isochromodes sheila p. 591, *phyllira*,
chiron, p. 592, spp. n., Costa Rica,
SCHAUS Ann. Nat. Hist. 8.—*I. propin-
qua* p. 182, *fulvida* p. 183, spp. n.,
Colombia, DOGNIN Mem. Soc. ent.
Belgique 18.—*I. fallax* Colombie sp. n.,
DOGNIN p. 44 Hét. nouv. 3.

Ischnopteris albimargo, *costiplaga*,
spp. n., Colombia, DOGNIN p. 179 Mem.
Soc. ent. Belgique 18.

Ischnopterix wagneri sp. n. Argen-
tina p. 74, LE MOULT Bull. Soc. ent.
France 1911.—*I. ? seriei* sp. n. Argentina
p. 39, GIACOMELLI An. Soc. gen.
Argentina 72.

Josia inaequiflexa Equateur sp. n.,
scalata var. n., DOGNIN p. 4 Hét. nouv.
4.

Kyrtolitha obstinata roseata n. var.
p. 247, THIERRY MIEG Naturaliste 32.

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MAN p. 327 Tr. Ent. Soc. London 1911.
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wegen etc., STICHEL p. 87 Berlin ent.

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Leptoctenopsis uxorcule sp. n. Venezuela, PROUT p. 704 *Ann. Nat. Hist.* 8.

Leptomiza festa sp. n. Formosa, BASTELBERGER p. 249 *Int. ent. Zs.* 4.

Leuciris mysteriotis sp. n. Porto Rico, PROUT p. 708 *Ann. Nat. Hist.* 8.

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Lipogonia gen. n. *rufivena* sp. n., S. Africa, WARREN *Ann. S. Afric. Mus.* 8 p. 24.

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Lobochlora vicina sp. n. Sumatra, BASTELBERGER p. 53 *Int. ent. Zs.* 5.

Lobogonia bilineata, aculeata, spp. n., Formosa, WILEMAN p. 61 *Entomologist* 44.—*L. sphagnata* sp. n. Formosa, BASTELBERGER p. 90 *Soc. entomol.* 25.

Lobopelta antonia sp. n. Colombia, PROUT p. 710 *Ann. Nat. Hist.* 8.

Lomographa angulilinea Colombie p. 19, *griseolineata* Equateur p. 20, spp. n., DOGNIN *Hét. nouv.* 4.

Lycia tortuosa pl. xxx f. 1 and pl. xxxi f. 27 sp. n. Japan, WILEMAN p. 310 *Tr. Ent. Soc. London* 1911.

Lygranoa confusa sp. n. Japan p. 321 pl. xxxi f. 8, WILEMAN *Tr. Ent. Soc. London* 1911.—*L. violescens* sp. n. Formosa, WILEMAN p. 60 *Entomologist* 44.

Melanolophia conspicua p. 599, *directilinea* p. 600, spp. n., Costa Rica, SCHAUS *Ann. Nat. Hist.* 8.

Melinodes dentilinea Colombie sp. n., DOGNIN p. 48 *Hét. nouv.* 3.

Melochlora inquilina sp. n. Colombia, DOGNIN p. 161 *Mem. Soc. ent. Belgique* 18.

Mesoleuca altera sp. n. Formosa, BASTELBERGER p. 242 *Int. ent. Zs.* 4.

Meticulodes triplilunata sp. n. Colombia, PROUT p. 710 *Ann. Nat. Hist.* 8.—*M. carrerasi* sp. n. Argentina p. 39, GIACOMELLI *Ann. Soc. Argentina* 72.

Metrocampa honoraria virescens ab. n., LUCAS p. 489 *Ann. Soc. ent. France* 79.

Miantonota imitans ab. n. *versiplaga*, DOGNIN p. 161 *Mem. Soc. ent. Belgique* 18.—*M. modesta* Mexique sp. n., DOGNIN p. 22 *Hét. nouv.* 3.

Microgonia bilinea p. 583, *sinuosa, extranea*, p. 584, *sixola* p. 585, *singularis* p. 586, spp. n., Costa Rica, SCHAUS *Ann. Nat. Hist.* 8.—*M. subdensata* p. 39 with ab. n. *diluta* p. 40, *fulvicolor* p. 40 with ab. n. *granulosa* p. 41, *pinctilinea* p. 41 with ab. n. *tenebrosa* p. 42, Colombia, spp. n., *subumbrata purpureogrisea* p. 39 var. n., DOGNIN *Hét. nouv.* 3.—*M. uniformis nigrinotata* ab. n., DOGNIN p. 25 *Hét. nouv.* 4.

Micronissa doddaria sp. n. p. 32 pl. xciii fig. 910, OBERTHÜR *Et. Lep. comp. fasc.* 5.

Microsemia consociata sp. n. Costa Rica, SCHAUS p. 581 *Ann. Nat. Hist.* 8.

Milionia corusca, glaucula, chrysolena, spp. n., Ceram, *fulgida* ab. n. *cuspidata* Java, BASTELBERGER p. 251 *Ent. Rdsch.* 28.—*M. minahassae* sp. n. Minahassa, STRAND p. 70 *Ent. Rdsch.* 28.

Mimogonodes venata Pérou sp. n., DOGNIN p. 46 *Hét. nouv.* 3.

Mimosema versilinea sp. n. Colombia, DOGNIN p. 184 *Mem. Soc. ent. Belgique* 18.—*M. venipunctata* Colombie sp. n., DOGNIN p. 25 *Hét. nouv.* 4.

Mixopsis conferta Colombie sp. n., DOGNIN p. 45 *Hét. nouv.* 3.

Mnesithetis ornithospila sp. n. Cameroons, PROUT p. 292 *Entomologist* 44.

Mucronodes bolivari pl. xci fig. 887, *germaini* fig. 888, p. 45, spp. n., OBERTHÜR *Et. Lep. comp. fasc.* 5.

Mychonion ochracea Guyane sp. n., DOGNIN p. 26 *Hét. nouv.* 4.

Myrioblephara sublimbata sp. n. S. Africa, WARREN Ann. S. Afric. Mus. 8 p. 25. *Oligoclystia* gen. n. near *Chloroclystis*, *blanda* sp. n. Formosa, BASTELBERGER p. 90 Soc. entomol. 25.

Myrteta moupinaria sp. n. p. 32 pl. lxxxviii fig. 858, OBERTHÜR Et. Lep. comp. fasc. 5. *Onychia olbia* p. 293, *O. ? lampram-modes* p. 294, spp. n., S. Africa, PROUT Entomologist 44.

Nemacerota umbrosa sp. n. Japan, WILEMAN p. 281 Tr. Ent. Soc. London 1911. *Oospila dolens* sp. n. Colombia, DRUCE p. 293 Ann. Nat. Hist. 7.

Nematocampa caudata Mexico sp. n., DOGNIN p. 47 Hét. nouv. 3. *Opisthoxia interrupta* sp. n. Costa Rica, SCHAUS p. 578 Ann. Nat. Hist. 8.

Nemoria plana sp. n. Japan, WILEMAN p. 340 Tr. Ent. Soc. London 1911.

Neoblasta gen. n. near *Apicia*, *sublimbata* sp. n. Guiana, DOGNIN p. 184 Mem. Soc. ent. Belgique 18. *Oporabia christyi*, characters, ALLEN pp. 79-82 Ent. Rec. 23.

Neodesmodes muscosa Amérique du sud sp. n., DOGNIN p. 38 Hét. nouv. 3. *Opthamophora leucophis* sp. n. Peru, BASTELBERGER p. 149 Int. ent. Zs. 5.

Neofidonia olivescens nigerrima var. n., DOGNIN p. 22 Hét. nouv. 4. *Oreonoma sectiplaga* sp. n. p. 30, *consersata* var. n. p. 31, Colombie, DOGNIN Hét. nouv. 3.

Neosterrha cryptereuthus sp. n. Colombia, PROUT p. 705 Ann. Nat. Hist. 8. *Orsonoba aegyptiaca*, ANDRES Ent. Zs. 25 p. 133.

Nephodia (Nipteria) admirationis, aegrotans, spp. n., S. America, PROUT p. 709 Ann. Nat. Hist. 8.—*N. flavivertex, spissata*, Colombie, *latifascia* Peru, spp. n., DOGNIN p. 33 Hét. nouv. 3.—*N. minima, N. ? imperilla*, Colombie, spp. n., DOGNIN p. 21 Hét. nouv. 4. *Ortholitha corioidea* sp. n. Formosa, BASTELBERGER p. 241 Int. ent. Zs. 4.—*O. cervinata fumosata* subsp. n. p. 292 fig. 3, TURATI Bull. Soc. ent. France 1911.—*O. limitata*, Eier, RICHTER Polyxena Wien 5 p. 33.

Nipteria illitirata, coenulenta, bicolor, p. 34, *insuavis* p. 35, Colombie, spp. n., DOGNIN Hét. nouv. 3.—*N. cuculoides* Colombie sp. n., DOGNIN p. 20 Hét. nouv. 4. *Orthoprora unifilata* sp. n. Peru, BASTELBERGER p. 150 Int. ent. Zs. 5.

Notoreas leucobathra [vide *Dasyuris* supra], *atmogramma*, New Zealand, spp. n., MEYRICK p. 59 Tr. N. Zeal. Inst. 43. *Oxydia harmonidaria* p. 50 pl. xevi fig. 940, *bararia* pl. xcv fig. 928, *schunckaria* pl. xevi fig. 941, *garlepparia* fig. 936, p. 52, *falcatarata* pl. xcv fig. 935, *mathassi* pl. xevi fig. 943-944, p. 57, *ockendeni* p. 58 pl. xcv fig. 931-932, spp. n., OBERTHÜR Et. Lep. comp. fasc. 5.

Ochyria tenella sp. n. S. Africa, WARREN Ann. S. Afric. Mus. 8 p. 22.—*O. neocosma* sp. n. Colombia, DOGNIN p. 171 Mem. Soc. ent. Belgique 18. *Palimpsestes undosa* pl. xxx f. 20, *basalis* f. 24, p. 282, spp. n., Japan, WILEMAN Tr. Ent. Soc. London 1911.—*P. taiwana* sp. n. Formosa, WILEMAN p. 150 Entomologist 44.

Odezia atrata nigerrima n. var. p. 47, THIERRY MIEG Naturaliste 32. *Paracomistis sordida* sp. n. Colombia, DOGNIN p. 183 Mem. Soc. ent. Belgique 18.

Oenoptila laudata sp. n. Costa Rica, SCHAUS p. 594 Ann. Nat. Hist. 8.—*O. atripunctaria* Colombie sp. n., DOGNIN p. 37 Hét. nouv. 3. *Paurophlebia* nom. n. for *Paurophlebs*, DOGNIN p. 28 Hét. nouv. 4.

Oenothalia montivaga sp. n. Costa Rica, SCHAUS p. 598 Ann. Nat. Hist. 8.—*O. subpallida* sp. n. Colombia, DOGNIN p. 180 Mem. Soc. ent. Belgique 18. *Paurophlebs* gen. n. *Epiplemidæ* p. 57, *obscura* p. 58, Colombie, spp. n., DOGNIN Hét. nouv. 3.

Periclina cervinoides sp. n. Costa Rica, SCHAUS p. 591 Ann. Nat. Hist. 8.

Periclinia convergens sp. n. Peru, BASTELBERGER p. 148 Intern. ent. Zs. 5.

Peridela inaequilinea sp. n. S. Africa, WARREN Ann. S. Afric. Mus. 8 p. 26.

Perizoma taiwana, simulata, spp. n., Formosa, WILEMAN p. 29 Entomologist 44.—*P. lineola* sp. n. Formosa, BASTELBERGER p. 90 Soc. entomol. 25.—*P. particulata, viridiplana*, spp. n., Formosa BASTELBERGER p. 242 Int. ent. Zs. 4.—*P. carnietincta* Colombie sp. n., DOGNIN p. 25 Hét. nouv. 3.—*P. glauca* p. 8, versatilis p. 9 with varr. n. *semiplela, completa*, p. 10, *quadriplaga* p. 10, *fractifascia* p. 11, Colombie, spp. n., DOGNIN Hét. nouv. 4.—*P. complicata* sp. n. Colombia, DOGNIN p. 171 Mem. Soc. ent. Belgique 18.

Pero semibrunnea sp. n. Guiana, DOGNIN p. 186 Mem. Soc. ent. Belgique 18.—*P. grossbecki* sp. n. Utah p. 91 f. 1, PEARSALE J. New York Ent. Soc. 19.

Petelia mediorufa sp. n. Formosa, BASTELBERGER p. 249 Int. ent. Zs. 4.—*P. vinasaria* p. 596, *pallidula, nigri-vestita*, p. 597, *cariblanca* p. 598, spp. n., Costa Rica, *umbrosa* ♀ p. 598, SCHAUS Ann. Nat. Hist. 8.

Phasiane rippertaria ravouxi n. var. p. 46, THIERRY-MIEG Naturaliste 32.

Phellinodes intermedia sp. n. Colombia, DOGNIN p. 158 Mem. Soc. ent. Belgique 18.—*P. cellulata* Equateur, *lati-plex* Guyane, p. 20, *praecostalis* Colombie p. 21, spp. n., DOGNIN Hét. nouv. 3.—*P. parornata* Guyane sp. n., DOGNIN p. 3 Hét. nouv. 4.

Pherotesia suffumosa Colombie sp. n., DOGNIN p. 21 T.c.—*P. liciata* sp. n. Peru, DOGNIN p. 178 Mem. Soc. ent. Belgique 18.

Phibalapteryx aemulata ab. n. *saurucki*, SCHAWERDA Verh. ZoolBot. Ges. Wien 61 pp. (175)–(177).

Phrudocentra ? nigromarginata Colombie sp. n., DOGNIN p. 6 Hét. nouv. 4.

Phyllodonta muscilinea Colombie sp. n., DOGNIN p. 45 Hét. nouv. 3.

Plesiophyle gen. n. near *Mimophyle*, *cinerascens* sp. n. Argentine, DOGNIN Hét. nouv. 4.

Polla carnipennis Paraguay sp. n., DOGNIN p. 46 Hét. nouv. 3.

Polyphasia scalata sp. n. Formosa, BASTELBERGER p. 90 Soc. entomol. 25.—*P. fumata* sp. n. Formosa, BASTELBERGER p. 23 Int. ent. Zs. 4.

Polyplocia aenea sp. n. Formosa, WILEMAN p. 150 Entomologist 44.

Polypoetes subcandidata, semicoerulea, spp. n., Colombia, DOGNIN p. 159 Mem. Soc. ent. Belgique 18.

Prasinocyma nigripes Colombie sp. n., DOGNIN p. 23 Hét. nouv. 3.—*P. dorsipunctata* sp. n. S. Africa, WARREN Ann. S. Afric. Mus. 8 p. 21.

Prionia berytana sp. n. Beirut, REBEL Verh. ZoolBot. Ges. Wien 30 pp. (142)–(156).

Problepsis superans, STRAND Ent. Rdsch. 28 p. 122.

Progonodes fenestrata sp. n. Peru, BASTELBERGER p. 54 Int. ent. Zs. 5.

Prorhinia rantaizana sp. n. Formosa, WILEMAN p. 343 Entomologist 44.

Prosomphax gen. n., *callista* sp. n. S. Africa, WARREN Ann. S. Afric. Mus. 8 p. 20.

Proteostrenia pica pl. xxx f. 18, *atrata* pl. xxxi f. 24, spp. n., Japan, WILEMAN Tr. Ent. Soc. London 1911.

Psaliodes aliena p. 166, *stimulata, exuberans*, p. 167, *composita, coacta*, p. 168, *olivescens* p. 169, *annuligera* p. 170, spp. n., Colombia, DOGNIN Mem. Soc. ent. Belgique 18.—*P. aquila, oleagina*, p. 25, *apostata* p. 26, Colombie, spp. n., DOGNIN Hét. nouv. 3.

Pseudapicia merana sp. n. Costa Rica, SCHAUS p. 582 Ann. Nat. Hist. 8.

Psodos trepidaria, Puppe, HOFFMANN Intern. ent. Zs. 5 p. 248.—*P. trepidaria*, Ei und Raupe, KITT p. (172) Verh. z.-b. Ges. Wien 61.

Psychostrophia melanargia ab. n. *albomaculata* p. 345 pl. xxxi f. 1, WILEMAN Tr. Ent. Soc. London 1911.

Ptychopoda simililinea p. 7, *flavimorsa* p. 8, Colombie, spp. n., DOGNIN Hét. nouv. 4.

Pyrinia rufa Equateur sp. n., DOGNIN p. 49 Hét. nouv. 3.

Racheolopha imula Guyane sp. n., DOGNIN p. 23 Hét. nouv. 3.

Racheospila ockendeni sp. n. Peru, DRUCE p. 293 Ann. Nat. Hist. 7.—*R. inconspicua* sp. n. Columbia, BASTELBERGER p. 54 Int. ent. Zs. 5.—*R. magnaria* sp. n. Mexico, BASTELBERGER p. 149 T.c.

Ratiaria compta sp. n. Costarica, BASTELBERGER p. 149 T.c.

Rhinura populonia ab. n. obscurior, DOGNIN p. 171 Mem. Soc. ent. Belgique 18.

Rhodomena algosa abb. n. *deficiens* and *griseata*, DOGNIN p. 165 T.c.—*R. obstructa* p. 13, *biplagiata* p. 14, *roseofusa* p. 15, Colombie, spp. n., DOGNIN Hét. nouv. 4.

Rhombophylla gen. n. type *Epiplema xylinopis* Turn., TURNER p. 79 Ann. Queensland Mus. 10.

Rhomborista megaspilaria gibbosa subsp. n., PROUT p. 27 Entomologist 44.

Rhopalodes concinna sp. n. Peru, DOGNIN p. 177 Mem. Soc. ent. Belgique 18.—*R. castniata* ♂, LE MOULT Bull. Soc. ent. France 1911 p. 76.

Sabulodes turmalis, planaria, p. 588, *infida, nubifera*, p. 589, *exsecrata*, *S. ? lineata*, p. 590, spp. n., Costa Rica, SCHAUS Ann. Nat. Hist. 8.—*S. gorgophonaria* pl. lxxxviii fig. 857, *animata* pl. lxxxix fig. 869, *gorgorisaria* fig. 864, p. 42, *mimulata* fig. 865, *mimallonata* fig. 866, *gorgythionata* fig. 872, *gortyniaria* fig. 871, *gorgoniaria* fig. 871, *gorgoniaria* pl. xciii fig. 907, *gorgosaria* pl. lxxxix fig. 870, *gonnapearia* fig. 873, *petropolisaria* pl. xciii fig. 909, *schunckeii* fig. 908, p. 43, *cenchiriaria* pl. xcii fig. 901, *cephalionaria* fig. 902, *monasticaria* fig. 904, *molorcharia* fig. 905, p. 44, spp. n., OBERTHÜR Et. Lep. comp. fasc. 5.

Saccoploca brunneata sp. n. Colombia, DOGNIN p. 188 Mem. Soc. ent. Belgique 18.

Sangala splendidissima sp. n. Süd-America, BASTELBERGER p. 148 Int. ent. Zs. 5.—*S. subobscura* sp. n. & var. *obliterata*, p. 247, THIERRY-MIEG Naturaliste 32.

Sangalopsis darthula lena n. var., *incaudata selma* n. var., p. 235, THIERRY-MIEG T.c.

Sarcinodes subvirgata sp. n. New Guinea, PROUT p. 703 Ann. Nat. Hist. 8.

Sauris plagulata sp. n. Formosa, BASTELBERGER p. 241 Int. ent. Zs. 4.

Scodionia albirosea sp. n. Algeria, ROTHSCHILD p. 232 Ann. Nat. Hist. 8.—*S. duponti* sp. n. p. 140, THIERRY-MIEG Naturaliste 32.

Scordylia morvena sp. n. p. 248, THIERRY-MIEG T.c.

Scotosia incola sp. n. Formosa, BASTELBERGER p. 22 Int. ent. Zs. 4.—*S. dubitata*, hibernation, CARTER p. 149 Naturalist 36.

Scotura albicuneata sp. n. Colombia, DOGNIN p. 159 Mem. Soc. ent. Belgique 18.—*S. biplaga flaviplaga* var. n., DOGNIN p. 6 Hét. nouv. 4.

Sebastosema ? tripartita sp. n. Japan p. 305 pl. xxxi f. 5, WILEMAN Tr. Ent. Soc. London 1911.

Selenephra lunigera, ab., FIEDLER Ent. Rdsch. 28 p. 18.

Selidosema manitoba sp. n. Canada, GROSSEBECK p. 225 Canad. Ent. 43.—*S. ochrea* Dunedin sp. n., HOWES p. 127 Tr. N. Zeal. Inst. 43.

Semiothisa guapilaria, poasaria, spp. n., Costa Rica, SCHAUS p. 580 Ann. Nat. Hist. 8.—*S. subcelata* Bolivie sp. n., DOGNIN p. 39 Hét. nouv. 3.

Siculodopsis semifasciata Colombie sp. n., DOGNIN p. 27 Hét. nouv. 4.

Siona decussata; Puppe und Raupe, SPITZ Verh. z.-b. Ges. Wien 61 p. 40; *infumata* ab. n. p. 47, THIERRY-MIEG Naturaliste 32.

Siosta bifasciata ab. n. *reducta* Colombia, BASTELBERGER p. 148 Int. ent. Zs. 5.

Sirinopteryx rosinaria sp. n. p. 32 pl. xlviii fig. 861, OBERTHÜR Et. Lep. comp. fasc. 5.

Spargania subdecorata Colombie sp. n. p. 12, *ruftaeniata rufidentata* var. n. p. 11, DOGNIN Hét. nouv. 4.—*S. rutila* sp. n. Peru, BASTELBERGER p. 157 Int. ent. Zs. 5.

Spilopera rubridisca sp. n. Formosa, WILEMAN p. 400 Entomologist 44.

Stamnodes affiliata sp. n. California, PEARSALL p. 252 Canad. Ent. 43.

Stegania mabellearia pl. xviii f. 8, *alba* var. n., LUCAS p. 488 Ann. Soc. ent. France 79.—*S. trimaculata*, ab.

cognataria, GAUCKLER Ent. Jahrb. 21 p. 131.

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Synelis nigricosta Colombie sp. n., DOGNIN p. 8 Hét. nouv. 4.

Syntaracta hadassa ab. n. *unicolor* pl. xxxi f. 26 p. 299, WILEMAN Tr. Ent. Soc. London 1911.

Syrrhaema gen. n., *cretata* sp. n., Parana, DOGNIN p. 50 Hét. nouv. 3.

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TINEIDAE.

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Borkhausenia semifuscata **sp. n.** Algeria, WALSINGHAM p. 189 Ent. Mo. Mag. 47.—*B. acida* **sp. n.** S. Africa,

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Dichomeris sciastes p. 90 pl. iii f. 10, *dignella*, *lypetica*, p. 91, *substratella*, *perenopholis*, pl. iii f. 11, p. 93, *hexasticta*, *leucostena* f. 12, *melanota* f. 13, p. 94, *arotrosena*, *nessica*, p. 95, *mericana*, *renascens* f. 14, *ardesiella*, p. 96, *jugata*, *melissia*, p. 97, *dolbyi* f. 22, *ochropyga*, *abortiva* f. 21, p. 98, *carinella* f. 20, *evitata* f. 15, *argigastrea* f. 16 p. 99, *daedalea* f. 17, *xerodes*, p. 100, *ruthostola* f. 18, *lyrella* f. 19, p. 101, *hypochloa* f. 23, *mistipalpis* f. 24, *habrochitona* f. 26, p. 102, *servilis* f. 25 p. 103, spp. n., Centr. America, *subalbella* = (*inaequipulvella* Ch. = *chambersella* Mrtf.) p. 101, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.—*D. marginellus* life history pp. 35–36, FELT New York St. Mus. Bull. 147.

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Epiphthora crystallista sp. n. S. Africa, MEYRICK p. 229 T.c.

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Eudactylota gen. n. for *Neodactylota barbarella* Busck p. 54 pl. ii f. 13, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.

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Eupragia gen. n. p. 106, *solida* sp. n. Mexico p. 107 pl. iii f. 28, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.

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Galactica gen. n. *Hyponomeutidae* p. 14, *caradjae* sp. n. Algeria p. 15, WALSINGHAM Ent. Mo. Mag. 47.

Gelechia extincta sp. n. S. Africa, MEYRICK Ann. S. Afric. Mus. 2 p. 231.—*G. cycota* p. 65, *naufraga* p. 66, *opaula* p. 65, *prideuca* p. 66, spp. n., S. Africa, MEYRICK Ann. Transv. Mus. 3.—*G. phalacra*, *lacticaput*, *cerussata* pl. ii f. 18, *infracta*, p. 61, *cacoderma*, *venerranda*, p. 62, *nigripectus*, *albipectus*, *quinquedentata* pl. ii f. 19, *petraea* f. 20, p. 63, *cuneifera* p. 64, *repentina*, *neptica*, p. 65, *bufo*, *inaequalis*, *concinna*, pl. ii f. 22, p. 66, *creberrima*, *impurgata* pl. ii f. 23, *synthetica*, p. 67, *pleroma*, *scotodes* pl. ii f. 25, *hetaeria* f. 24, p. 68, *lithodes*, *nucifer*, *rhypodes*, *sonorensis* pl. ii f. 26, p. 69, spp. n., Centr. America, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.—*G. glaucoterna* *Invercargill* sp. n., MEYRICK p. 63 Tr. N. Zeal. Inst. 43.

Gephyristis oxystila sp. n. S. Africa, MEYRICK Ann. Transv. Mus. 3 p. 79.

Glyhidocera salinae pl. iii f. 33, *elpista*, p. 110, *stygnota* f. 32, *rhypara*, *umbrata* f. 34, p. 111, *perobscura* f. 35, *vestita*, *reparabilis*, p. 112, spp. n., Centr. America, WALSINGHAM Biol. Centr.-Amer. Lep. Het. 4.

Glyphipteryx dichalina p. 290, *medica* p. 291, spp. n., Seychelles, MEYRICK Tr. Linn. Soc. 14.—*G. bactrias* *Invercargill* sp. n., MEYRICK p. 67 Tr. N. Zeal. Inst. 43.—*G. erastis*, *dichorda*, New Zealand, spp. n., MEYRICK p. 76 T.c.

Gnorimoschema salinaris p. 4, *subterranea* p. 5, spp. n., Boston, BUSCK Canad. Ent. 43.—*G. septentrionella* sp. n. Quebec, FYLES p. 422 Canad. Ent. 43.—*G. atriplicella*, STRAND p. 169 Berlin ent. Zeitschr. 55.—*G. gallaediopappi* and *gallaesterella*, FYLES p. 135 Canad. Ent. 43.—*G. gallaesolidaginis*, gall, COOK Michigan Geol. Biol. Surv. Pub. 1 p. 33.

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Gonioterma rosa p. 224 f. 28, *stella* f. 29, *inga* f. 30, p. 225, *emma* f. 24, *vita* f. 26, p. 226, *anna* p. 224 f. 27, spp. n., Guiana, BUSCK T.c.

Gracilaria terebinthiella sp. n. p. 272, CHRÉTIEN Naturaliste 32.—*G. elaeas* Castle Hill sp. n., MEYRICK p. 66 Tr. N. Zeal. Inst. 43.—*G. syringella*, food-plant, SICH p. 277 Ent. Mag. 47.

Gymnogramma pyroxancla sp. n. S. Africa, MEYRICK Ann. Transv. Mus. 3 p. 77.

Hasta gen. n., *argentidorsella* sp. n. Brazil f. 3 p. 210, BUSCK Proc. U. S. Nation. Mus. 40.

Hednophora gen. n. *Oecophoridae* p. 232, *pyritis* sp. n. S. Africa, p. 233, MEYRICK Ann. Transv. Mus. 2.

Hieroxestis florea, *cyanodesma*, *selacta*, p. 294, *tarsota*, *heliogramma*, *rhothiaula*, *ensifera*, p. 295, *irenica*, *rhodothicta*, *hermatias*, p. 296, *nephalia*, *ichnora*, *fricata*, p. 297, *lactiflua* p. 298, spp. n., Seychelles, MEYRICK Tr. Linn. Soc. 14.

Hypsilophus n. n. for *Ypsolophus*, synonymy, WALSINGHAM p. 89 Biol. Centr.-Amer. Lep. Het. 4.

Hyptiastis gen. n. near *Brachmia* p. 733, *clematias* sp. n. S. India p. 724, MEYRICK J. Bombay Soc. 20.

Idiophantis spectrata sp. n. Seychelles, MEYRICK p. 272 Tr. Linn. Soc. 14.

Imma quaestoria sp. n. Aldabra, MEYRICK p. 290 T.c.

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Lata; STRAND p. 167 Berlin ent. Zeitschr. 55.

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Lithocolletis purgantella **sp. n.** p. 274, CHRÉTIEN Naturaliste 32.—*L. encaeria* **sp. n.** S. Africa, MEYRICK Ann. Transv. Mus. 2 p. 234.—*L. conista* **sp. n.** Pusa, MEYRICK p. 212 Ent. Mag. 47.

Lyonetia probolactis **sp. n.** Seychelles, MEYRICK p. 293 Tr. Linn. Soc. 14.

Macarostola parolca **sp. n.** Seychelles, MEYRICK p. 292 Tr. Linn. Soc. 14.

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Mapa **gen. n.** *Gelechiidae*, *cordillerella* **sp. n.** Mendoza, STRAND p. 171 Berlin. ent. Zeitschr. 55.

Mastigostoma **gen. n.** near *Setomorpha* p. 301, *gypsata* **sp. n.** Seychelles p. 302, MEYRICK Tr. Linn. Soc. 14.

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fig. 1, *augusta* Madagascar p. 254,
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p. 353 f. 31, *grandis* p. 350 f. 27,
luctuosa p. 351 f. 24, *basalis* f. 26,
angelita f. 29, *brunnea*, p. 352, *formosa*
p. 353, *mainensis* p. 354, spp. n., N.
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Lysmus gen. nov. *Osmylidarum* p. 112, *nikkoënsis* sp. n. Japan p. 113 f. 3

and *Osmylus* spp., NAVÁS Rev. russ. ent. 11.—*L. leucomatodes* Congo sp. n., NAVÁS p. 234 fig. 4 Rev. Zool. afric. 1.

Macronemurus lepidulus sp. n. Egypt, NAVÁS p. 748 Verh. internat. Zool. Kongr. 8.—*M. chloranthe* f. 10, *iolanthe*, p. 23, *melanthe* f. 19, *evanthe*, p. 24, *ianthe* f. 2, *loranthe* f. 23, p. 25, *pulchellus* p. 26, spp. n., Africa, BANKS Ann. Ent. Soc. Amer. 4.—*M. trivittatus* sp. n. India p. 101, BANKS Proc. Ent. Soc. Washington 13.

Mantispa; larva, LEWIS J. Quekett Club 11 pp. 213-216.—*M. formosana* sp. n., OKAMOTO p. 297 Zool. Anz. 37.—*M. cincticornis*, *fuscicornis* p. 347, spp. n., N. America, *brunnea occidentis* var. n. p. 348, BANKS Trans. Amer. Ent. Soc. 37.—*M. perla* var. *lobata* var. n. Transcaspia p. 535, *adelungi* Caucasus p. 536 f. 1 sp. n., NAVÁS Ann. mus. zool. St. Pétersb. 16.

Megaloptera, a separate Order with famm. *Sialidae* and *Raphidiidae*, revision, WEELE Coll. Selys Longchamps 5.

Micromus benardi sp. n. Tonkin, NAVÁS p. 750 Verh. internat. Zool. Kongr. 8.

Mossa gen. n. near *Myrmeleon* p. 242, *externa* sp. n. p. 243 fig. 8, Guinée française, NAVÁS Rev. Zool. afric. 1.

Myrmecaelurus subcostatus sp. n. Erythraea p. 6, BANKS Ann. Ent. Soc. Amer. 4.

Myrmeleon cephalicus sp. n. p. 244 fig., NAVÁS Insecta 1.—*M. doralice* f. 5, *alcestris* f. 1, p. 10, *medialis* f. 15, *furcatus* f. 3, p. 11, *atlas* p. 12, spp. n., Africa, BANKS Ann. Ent. Soc. Amer. 4.—*M. abyssinicus* sp. n. Abessinia, KLAFALEK p. 177 Ent. Zs. 25.

Nallachius loxanus sp. n. Ecuador, NAVÁS Ann. Soc. sci. Bruxelles 35 Doc. p. 21.

Neboda gen. n. *Myrmeleonidarum*, *negligens* sp. n. Hong-Kong, p. 116 f. 6, NAVÁS Rev. russ. ent. 11.

Nelees punctatus sp. n. p. 245 fig. 2, NAVÁS Insecta 1.—*N. propinquus* sp. n. Crimea, NAVÁS Ann. mus. zool. St. Pétersb. 16 p. 529.

Nemoleon alcidice p. 20, f. 6, *pardalice* f. 13, *4-maculatus*, p. 21, spp. n., Africa, BANKS Ann. Ent. Soc. Amer. 4.

Nemopistha hennini sp. n. Congo, NAVÁS Ann. Soc. sci. Bruxelles 35 Doc. p. 224.—*N. eretmoptera* Nigérie p. 232 fig. 2 sp. n., *lancearia* p. 233 fig. 3, NAVÁS Rev. Zool. afric. 1.

Nemoptera karrooa p. 36 fig. 5 sp. n. S. Africa, PERINGUEY Ann. S. Afric. Mus. 10.

Nina meade-waldoi sp. n. India or., NAVÁS p. 25 Zs. wiss. Insektbiol. 7.

Nosa gen. n. near *Palpares*, *leonina* sp. n. Congo, NAVÁS p. 239 fig. 5 Rev. Zool. afric. 1.

Nothochrysa guerini p. 280 Senegal, *cuneata* p. 281 Brazil, spp. n., NAVÁS Ann. Soc. sci. Bruxelles 35 Mém.

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Panorpa galloisi sp. n. Japan, MIYAKE p. 93 Entomologist 44.—*P. longipennis* sp. n. North Carolina p. 349, BANKS Trans. Amer. Ent. Soc. 37.—*P. leucothrya*, *bouvieri*, *nipponensis*, *drouarti*, *dyscola* transf. to *Aulops*, *P. stigmale* transf. to *Campodotecnium*, NAVÁS Rev. russ. ent. 11 p. 116.

Panorpidae; list of Jpanese, MIYAKE pp. 90–92 Entomologist 44.

Raphidia notata var. n. *aperta* p. 246 fig. 3, NAVÁS Insecta 1.—*R. distincta*, *astuta*, *arizonica*, spp. n., N. America, BANKS Trans. Amer. Ent. Soc. 37 p. 338.

Semidalis alluaudina sp. n. Canary islds., NAVÁS p. 749 Verh. internat. Zool.Kongr. 8.

Sogra gen. n. (not described) *perversa* Congo sp. n., NAVÁS p. 240 fig. 6 Rev. Zool. afric. 1.

Spilosmylus, a genus, composition, NAVÁS Rev. Zool. afric. 1 p. 255.

Stilbopteryx linearis sp. n. Australien, NAVÁS p. 12 Ent. Rdsch. 28.

Symphorobius californicus, *sparsus*, *arizonicus*, p. 346, *bifasciatus* p. 347, spp. n., N. America, BANKS Trans. Amer. Ent. Soc. 37.

Symphrasis nassonovi sp. n. Peru, NAVÁS Ann. mus. zool. St. Pétersb. 16 pp. 537–538 f. 2.

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CECIDOMYIIDAE (or ITONIDAE).

A generic synopsis of the *Itonidae*, FELT J. New York Ent. Soc. 19 pp. 31–62.

Hosts and galls of American gall midges; FELT J. Econ. Ent. 4 pp. 451–475.

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Aphis gossypii (Russ.), VASILJEV Trd.
b. entom. učn. Kouv. Gl. Upr.-Zeml.
St. Petersburg 8 6 1910 pp. 16-19 f. 6.

Asphondylia eupatorii, p. 546, *thalictri* p. 547, **spp. n.**, U.S., FELT J. Econ.
Ent. 4.—*A. vincenti* **sp. n.** West Indian
Islands p. 109, FELT Ent. News 22.—
A. pattersoni **sp. n.** p. 301 West Indies,
FELT T.c.

Asteromyia nigrina, reducta, **spp. n.**,
Massachusetts, p. 481, FELT J. Econ.
Ent. 4.

Bremia mahensis **sp. n.** Seychelles,
KIEFFER p. 326 Tr. Linn. Soc. 14.

Bruggmanniella mexicana **sp. n.**
Mexico p. 547, FELT J. Econ. Ent. 4.

Cecidomyia cerasiphila, hopkinsi, **spp.**
n., California, p. 554, FELT J. Econ.
Ent. 4.—*C. irregularis* p. 9, *squamulicla*
p. 16, *castaneae* p. 17, *lappa*,
muscosa, f. 66, p. 35, *reniformis* p. 36
ff. 71-72, *potentillaecaulis* p. 37, *venae*
p. 39 f. 79, *racemi* **sp. n.** p. 39 f. 81,
crotonariae p. 40 f. 83, *celastri* p. 41,
parthenocissi p. 44 f. 91, *tuba* p. 46,
inaequalis p. 48, *bifolia* p. 49, *euthamiae*,
gemmaria, f. 110, *strobiligemma* f. 111
p. 53, **spp. n.**, Massachusetts, STEBBINS
Springfield Mus. Bull. No. 2.

Ceratomyia **gen. n.** *johannseni* **sp. n.**
North America, FELT p. 33 J. New
York Ent. Soc. 19.

Chrysodiplosis **gen. n.**, *pulchricornis*,
p. 318, *homotomus* p. 319, **spp. n.**,
Seychelles, KIEFFER Tr. Linn. Soc.
14.

Clinodiplosis scotti, insularum, **spp. n.**,
Seychelles, KIEFFER p. 326 T.c.

Coccidomyia **gen. n.**, *pennsylvanica*
sp. n. North America, FELT p. 45 J.
New York Ent. Soc. 19.

Contarinia ribis, Beschreibung, p. 181,
C. pisicola **sp. n.** Niederlande p. 183,
DE MEYERE Tijdschr. Ent. 54.—*C.*
spiraeina **sp. n.** Massachusetts p. 547,
FELT J. Econ. Ent. 4.—*C. lycopersici*
sp. n. p. 303 West Indies, FELT Ent.
News 22.

Cordylomyia **gen. n.**, *coprophila* **sp. n.**
North America, FELT p. 35 J. New
York Ent. Soc. 19.

Corinthomyia **gen. n.** type *Campylo-*
myza hirsuta p. 35, FELT T.c.

Cystiphora viburnifolia **sp. n.** Massa-
chusetts p. 480, FELT J. Econ. Ent. 4.

Dasyneura communis p. 478, *gibsoni*
p. 479, *pergandei, smilacifolia*, p. 480,
spp. n., N. America, FELT T.c.—*D.*
smilacinae **sp. n.** New York, BISHOP
Ent. News 22 p. 346.

Diadiplosis **gen. n.** p. 54, *cocci* **sp. n.**
West Indies p. 55, FELT J. New York
Ent. Soc. 19.

Dicrodiplosis coccidarum Porto Rico
p. 548, *gillettei* Colorado p. 549, **spp. n.**,
FELT J. Econ. Ent. 4.

Didactylomyia **gen. n.** type *Colpodia*
longimana p. 39, FELT J. New York
Ent. Soc. 19.

Endaphis hirta **sp. n.** Ceylon, FELT
Ent. News 22 p. 224.—*E. abdominalis*
Peru p. 128, *americana* Arizona p. 129,
spp. n., FELT T.c.

Epimyia **gen. n.**, *carolina* **sp. n.**
North America, FELT p. 38 J. New
York Ent. Soc. 19.

Erosomyia **gen. n.**, *mangiferae* **sp. n.**
West Indies, p. 49, FELT T.c.

Hyperdiplosis coffeae **sp. n.** p. 305
West Indies, FELT Ent. News 22.—
H. eupatorii **sp. n.** West Indian Islands
p. 110, FELT T.c.—*H. americana* **sp. n.**
p. 192 Panama, FELT J. New York
Ent. Soc. 19.—*H. fungicola* **sp. n.**
Washington p. 552, FELT J. Econ. Ent.
4.

Holoneurus mahensis **sp. n.** Sey-
chelles, KIEFFER p. 328 Tr. Linn. Soc.
14.—*H. occidentalis* **sp. n.** p. 190
Panama, FELT J. New York Ent. Soc.
19.

Itonida cucurbitae, spiraeina, p. 555,
taxodii p. 556, *pugionis* p. 557, *cincta*,
canadensis p. 558, **spp. n.**, N. America,
FELT J. Econ. Ent. 4.

Joannisia kiefferiana **sp. n.** Deutschl.,
ENDERLEIN p. 573 Zool. Anz. 37.—
J. latipennis p. 328, *seychellensis* p. 329,
spp. n., Seychelles, KIEFFER Tr. Linn.
Soc. 14.—*J. pennsylvanica* **sp. n.** Penn-
sylvania p. 476, FELT J. Econ. Ent. 4.

Kronomyia **gen. n.**, *populi* **sp. n.** New
York p. 476 f. 11, FELT T.c.

Lasioptera allioniae, *arizonensis*, spp. n., U.S., FELT p. 482 T.c.—*L. portulacae* sp. n. West Indies, FELT Psyche 18 p. 84.

Lasiapteryx schwarzi sp. n. p. 191 Panama, FELT J. New York Ent. Soc. 19.

Ledomia aurofulgens p. 316, *styloptera*, *mahensis*, p. 317, *monilicornis* p. 318, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.

Lepidodiplosis gen. n. near *Xylodiplosis* p. 319, *seychellensis*, *mahensis*, p. 320, *squamosipes*, *filipes*, p. 321, *nocticolor* p. 322, spp. n., Seychelles, KIEFFER T.c.

Leptosyna quercus sp. n. New York p. 546, FELT J. Econ. Ent. 4.

Lestodiplosis squamosus p. 323, *scotianus* p. 324, *ciliatipennis*, *L. (Copro-*
diplosis) nanus, p. 325, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.—*L. peruviana* sp. n. Peru, FELT Ent. News 22 p. 10.

Lobodiplosis coccidarum sp. n. St. Vincent, FELT p. 195 Canad. Ent. 43.

Meinertomyia nom. n. for *Pero* Mein. p. 37, FELT J. New York Ent. Soc. 19.

†*Meunieria succini* n. n. for *Miastor* du succin Meunier p. 36, FELT T.c.

Miastor? americana paedogenesis pp. 82–104 pls. 22–35 ff. 7–10, FELT New York St. Mus. Bull. 147.—*M.*, paedogenesis, FELT Science 33 p. 302; *M. larvae*, FELT J. New York Ent. Soc. 19 p. 200, and WHEELER T.c. p. 201, FELT Science 33 p. 583.

Mycodiplosis carolina North Carolina, *coccidivora* Jamaica, p. 549, *cucurbitae*, *spinosa*, p. 550, U.S., spp. n., FELT J. Econ. Ent. 4.

Mycophila gen. n., *fungicola* sp. n. North America, FELT p. 33 J. New York Ent. Soc. 19.

Neolasioptera agrostis, *squamosa*, p. 483, *trimera* p. 484, spp. n., U.S., FELT J. Econ. Ent. 4.

Neuromyia gen. n. type *Arnoldia minor* p. 44, FELT J. New York Ent. Soc. 19.

Oligarces ulmi sp. n. New York p. 477, FELT J. Econ. Ent. 4.

Parallelodiplosis clarkae sp. n. Massachusetts p. 553, FELT T.c.

(N-9186 j)

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Planodiplosis gen. n. near *Arthrocnodax*, *insularis* sp. n. Seychelles, KIEFFER p. 323 Tr. Linn. Soc. 14.

Promikiola gen. n. near *Mikiola*, *rubra* sp. n. Chile, KIEFFER & HERBST p. 700 Centralbl. Bakt. Abt. 2 29.

Prowinnertzia gen. n. near *Winnertzia*, *mahensis* sp. n. Seychelles, KIEFFER p. 327 Tr. Linn. Soc. 4.

Rhizomyia hirta sp. n. New York p. 478, FELT J. Econ. Ent. 14.

Rhopalomyia grossulariae sp. n. Ohio, FELT J. Econ. Ent. 4 p. 347.—*R. gnaphalodis* sp. n. Colorado p. 484, FELT J. Econ. Ent. 14.

Toxomyia gen. n., *fungicola* sp. n. West Indies, FELT p. 302 Ent. News 22.—*T. rubida* sp. n. St. Vincent, FELT Canad. Ent. 43 p. 194.

Tritozyga sackeni sp. n. North America, FELT p. 32 J. New York Ent. Soc. 19.

Winnertzia pectinata sp. n. New York p. 478, FELT J. Econ. Ent. 4.

Xenodiplosis nom. n. for *Allodiplosis* Rubs. p. 61, FELT J. New York Ent. Soc. 19.

Xylodiplosis calopus sp. n. Seychelles, KIEFFER p. 323 Tr. Linn. Soc. 14.

Youngomyia quercina p. 551, *vernoniae* p. 552, spp. n., U.S., FELT J. Econ. Ent. 4.

MYCETOPHILIDAE.

Asindulum brevirostre sp. n. Hungary, LUNDSTRÖM Ann. Mus. Hung. 9 p. 392 Taf. xi figs. 9–10.

Brachycampta cinerea, *fissicauda*, *pistillata* *radiata*, *spathulata*, spp. n., Austria-Hungary, LUNDSTRÖM T.c. pp. 397–401 Taf. xii figs. 1–8 Taf. xv figs. 8–10.

Epicypta and *Phronia*; larvae, BLOOMFIELD p. 94 Ent. Mag. 47.

Exechia clypeata, *furcata*, *magnicauda*, *serpentina*, *unguiculata*, n. spp., Austria-Hungary, LUNDSTRÖM Ann. Mus. Hung. 9 pp. 404–409 Taf. xiii figs. 1–14 Taf. xv fig. 17.

Fungivora mesorphina sp. n. Peru, SPEISER p. 238 Jahrb. Ver. Wiesbaden 64.

†*Leia miocenica* sp. n. Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 76.

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Macrocera kerteszi sp. n. Hungary, LUNDSTRÖM Ann. Mus. Hung. 9 p. 390 Taf. xi figs. 1-2.

Mycetophila czizekii sp. n. Mähren, LANDROCK Wien Ent. Ztg. 30 p. 164.—*M. curviseta*, *formosa*, *lamellata*, *limbata*, *longelamellata*, *tridentata*, *tuberosa*, spp. n., Hungary, LUNDSTRÖM Ann. Mus. Hung. 9 pp. 409-417 Taf. xiv figs. 1-12 Taf. xv figs. 1-5 11-13 15-16 18.—*M. ornata* Steph., ADAMS p. 93 Ent. Mag. 47.

Neurotelia Rond. = (*Anaclinia* Meig.), LANDROCK p. 161 Wien ent. Ztg. 30.

Paraneurotelia gen. n., near *Anaclinia*, *dziedzickii* sp. n. Mähren, LANDROCK T.c. p. 161.

Phronia mutila sp. n. Styria, LUNDSTRÖM Ann. Mus. Hung. 9 p. 403 Taf. xii figs. 15-17.

Platyura tristis sp. n. Hungary, LUNDSTRÖM pp. 391-392 Taf. xi figs. 3-6 T.c.

Rhymosia cretensis sp. n. Creta, LUNDSTRÖM p. 396 Taf. xi figs. 16-17 T.c.

Sciophila fissa, *forficata*, *tridens*, Austria, spp. n., LUNDSTRÖM pp. 394-395 Taf. xi figs. 11-12, Taf. xiv figs. 13-14, Taf. xv figs. 6-7 T.c.

Trichonta aberrans, *falcata*, spp. n., Hungary, LUNDSTRÖM pp. 401-403 Taf. xii figs. 11-13 T.c.

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CHIRONOMIDAE (or TENDIPEDIDAE).

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Bezzia hydrophila sp. n. Deutschl., KIEFFER p. 6 Bull. Soc. Metz 27.—*B. trispinosa*, *eucera*, spp. n., Calcutta, KIEFFER p. 123 Rec. Ind. Mus. 6.—*B. vaga* sp. n. Nepal, KIEFFER p. 329 T.c.

Camptocladius anomalus, *punctatus*, *aquaticus*, Germany, spp. n., p. 184, KIEFFER Bull. Soc. ent. France 1911.—*C. monticola* sp. n. Himalaya, KIEFFER p. 346 Rec. Ind. Mus. 6.

Ceratopogon trichotomma p. 332, *chrysolophus* p. 333, *lasionotus* p. 334, *lampronotus* p. 335, *psilonotus*, *aplonotus*, p. 337, *seychelleanus*, *falcinellus*, p. 338, *mahensis* p. 339, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.

Chaetocladius subg. n. vide *Dactylocladius*.

Chironomus formosus sp. n. Belgium, GOETGHEBUER p. 97 Ann. Soc. ent. Belgique 55.—*C. koenigi* sp. n. Bären-Insel, KIEFFER & LUNDBERK p. 274 König Avifauna Spitzbergen.—*C. callichirus*, *scotti*, p. 352, *brunneicornis*, *linearis*, p. 353, *leptogastrus*, *binotatus*, p. 354, *chloronotus*, *melanophilus*, p. 355, *seychelleanus*, *pandani*, p. 356, *limnocharis*, *nocticolor*, p. 357, *nigratipes*, p. 358, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.—*C. speciosus* p. 133, *pruinosis* p. 134, *nigrosparis* p. 135, *nocticola*, *ceylanicus*, p. 136, *polystictus* p. 137, *lobaticeps* p. 138, *lobaticollis*, *flaviventris*, p. 139, *verrucosus* p. 140, *grossipes*, *nigromarginatus*, p. 141, *callithorax* p. 142, *melanostolus*, *nigriforceps*, p. 143, *dolichogaster*, *semi-niger*, *lampronotus*, p. 144, *longicrus*, *fuscitarsis*, p. 145, *callicomus*, *lamprothorax*, p. 146, *tenerimus* p. 147, *noctua-bundus* p. 148, *dolichotomus* p. 149, *callinotus*, *melanophorus*, p. 150, *planicollis*, *breviforceps*, p. 151, *nocturnalis*, *oriplanus*, p. 152, *forficularius* p. 153, *barbatitarsis* p. 154, *callichirus*, *melanochirus*, p. 155, *melanostictus*, *callisphyrus*, p. 156, *aplochirus* p. 157, *aploneurus*, *leptochirus*, p. 158, *psilochirus*, *lasiuchirus*, p. 159, *callimorphus*, *viridiventris*, p. 162, *atrosignatus* p. 163, *nudipes*, *rostratus*, p. 164, *prasiogaster*, *chlorogaster*, p. 165, *semiviridis* p. 166, spp. n., India and Burma, KIEFFER

Rec. Ind. Mus. 6.—*C.*; Natur des Leuchters (Russ. + deutsch. Rés.), TSACENKO Bull. jard. bot. 11 pp. 31–43.

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Corynoneura conjungens, *arcuata*, *C. (Thienemanniella subgen. n.) clari-cornis*, p. 201, *nana* p. 202, *spp. n.*, Germany, KIEFFER Bull. Soc. ent. France 1911.—*C. seychellensis* *sp. n.* Mahé, KIEFFER p. 363 Tr. Linn. Soc. 14.

Cricotopus rectinervis, *lanceolatus*, *naicus*, *spp. n.*, p. 199, Germany, KIEFFER Bull. Soc. ent. France 1911.

Culicoides kiefferi p. 108, *flaviventris* p. 109, *spp. n.*, Belgium, GOETGHEBUER Ann. Soc. ent. Belgique 55.—*C. stigmaticus*, *photophilus*, *spp. n.*, Deutschl., KIEFFER p. 4 Bull. Soc. Metz 27.—*C. leucostictus* p. 340, *seychellensis*, *scotti*, p. 341, *aurantiacus* p. 342, *spp. n.*, Seychelles, KIEFFER Tr. Linn. Soc. 14.—*C. himalayae* p. 326, *pictiventris* p. 327, *spp. n.*, Himalaya, KIEFFER Rec. Ind. Mus. 6.

Dactylocladius subpilosus *sp. n.* Bären-Insel, KIEFFER & LUNDBECK p. 273 König Avifauna Spitzbergen.—*D. (Chaetocladius subgen. n.) setiger*, *fuscus*, *hamatipes*, *polychaetus*, *spp. n.*, *hamifer* var. *macrochaetus*, p. 182, *D. setosipennis*, *hamifer*, *longicalcar*, *miricornis*, *olivaceus*, *breviradius*, and var. *flaviforceps*, *adauctus*, p. 183, *hamatitarsis*, *fuscitarsis*, *brevicalcar*, *spp. n.*, *ampullaceus* and *pallidipes* n. varr. p. 184, Germany, KIEFFER Bull. Soc. ent. France 1911.—*D. mahensis* p. 361, *melanostolus*, *xanthostolus*, p. 362, *heterostolus*, *megalochirus*, p. 363, *spp. n.*, Seychelles, KIEFFER Tr. Linn. Soc. 14.—*D. tenuicrus* p. 174 Bengal, *noctivagus* Suez Canal p. 175, *spp. n.*, KIEFFER Rec. Ind. Mus. 6.

Dasyhelea halophila *sp. n.* Deutschl., KIEFFER p. 5 Bull. Soc. Metz 27.

Dibezzia *gen. n.* near *Palpomyia*, *clavata*, p. 120, *longistila* p. 121, *brevistila*, p. 122, *spp. n.*, India, KIEFFER Rec. Ind. Mus. 6.—*D. himalayae* *sp. n.* Himalaya, KIEFFER p. 328 T.c.

(N-9186 j)

Dolichocladius *gen. n.*, *heteropterus* *sp. n.* Burma, KIEFFER p. 176 T.c.

Forcipomyia corticis, *setosipennis*, *spp. n.*, Deutschl., KIEFFER p. 1 Bull. Soc. Metz 27.—*F. (Prohelea) cubicularis*, *himalayae*, p. 320, *F. calotricha*, *montivaga*, p. 322, *aticola*, p. 323, *rivicola*, *oriphila*, p. 324, *macrothrix*, *urbicola*, p. 325, *xanthophila* p. 326, *spp. n.*, Himalaya, KIEFFER Rec. Ind. Mus. 6.

Halliella *gen. n.* near *Tanytarsus* p. 172, *noctivaga* *sp. n.* Suez Canal p. 173, KIEFFER T.c.

Isoplastus pallidissimus p. 364, *minimus*, *aurantiacus*, p. 365, *spp. n.*, Seychelles, KIEFFER Tr. Linn. Soc. 14.—*I. oriplanus* p. 125, *photophilus* p. 126, *spp. n.*, India, KIEFFER Rec. Ind. Mus. 6.

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Nepalia *gen. n.*, *filipes* *sp. n.* India, KIEFFER Rec. Ind. Mus. 6 p. 348.

Oecacta hostilissima *sp. n.* West-Afrika, PITTALUGA p. 69 Centrbl. Bakt. Abt. 1 59 Orig.

Orthocladius setodinervis, *rivicola*, *longiradius*, *tazicola*, *rhyacobius*, *hygroptericus*, p. 181, *rhyacophilus*, p. 182, *spp. n.*, Germany, KIEFFER Bull. Soc. ent. France 1911.

Pachyleptus rufipes *sp. n.* Seychelles, KIEFFER p. 347 Tr. Linn. Soc. 14.

Palpomyia roseiventris, *leucopogon*, p. 114, *disticta* p. 115, *tetrasticta* p. 116, *polysticta*, *brevispina*, p. 117, *spp. n.*, India, KIEFFER Rec. Ind. Mus. 6.—*P. rivularis* *sp. n.* Himalaya, KIEFFER p. 328 Rec. Ind. Mus. 6.

Paraclunio *gen. n.* near *Psamathomyia*, *trilobatus* *sp. n.* California, KIEFFER pp. 103–105 Bull. Soc. Metz 27.

Paratendipes *gen. n.* für *Tendipes albimanus* Meig, KIEFFER p. 41 T.c.

Pelopia bimaculata var. n. *microtoma*, *oranta* var. n. *niveiforceps*, *enhydra*, *clavipennis*, *falcigera*, *nympha*, *barbatipes*, *costalis*, Deutschl., spp. n., KIEFFER pp. 12-18 T.c.—*P. callicoma* sp. n. Yunnan, KIEFFER p. 29 Rec. Ind. Mus. 6.—*P. saltatrix* p. 330, *brunettii*, *riparia*, p. 332, *himalayae* p. 333, spp. n., Himalaya, KIEFFER T.c.

Probezzia scotti p. 348, *longipennis*, *ornatissima*, p. 349, *seychelleana* p. 50, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.

Psectrocladius anomalus, *flavofasciatus najas*, spp. n., p. 185, Germany, KIEFFER Bull. Soc. ent. France 1911.—*P. flavicollis* sp. n. Calcutta, KIEFFER p. 176 Rec. Ind. Mus. 6.

Psectrotanypus migrator, *viator*, spp. n., *brevicalcar* varr. n. *thummi* and *stagnicola*, *longicalcar* var. n. *sordicola*, Deutschl., KIEFFER pp. 8-10 Bull. Soc. Metz 27.

Rhopalocladus gen. n., *himalayae* sp. n. Himalaya, KIEFFER p. 347 Rec. Ind. Mus. 6.

Serromyia festiva sp. n. Seychelles, KIEFFER p. 346 Tr. Linn. Soc. 14.

Sphaeromyias stictonota sp. n. Calcutta, KIEFFER p. 118 Rec. Ind. Mus. 6.—*S. hexacantha* p. 343, *pulchripennis* p. 344, *areolaris* p. 345, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.

Stilbobezzia gen. n. near *Palpomyia*, *festiva* sp. n. Calcutta, KIEFFER p. 118 Rec. Ind. Mus. 6.

Tanytarsus agrayloides p. 45, *bauri*, *psilopterus*, p. 46, *iridis* p. 47, *flavofasciatus* p. 48, *bathophilus* p. 49, *insularis* p. 50, *ellipsoidalis* p. 51, *hemipsilus*, *salinarius*, p. 52, *curticornis* p. 53, *lincki* p. 54, *longitarsis*, *curtimanus*, p. 55, *excisus* p. 56, *tetratomus* p. 57, *exsectus*, *trivialis*, p. 58, *atrofasciatus* p. 59, *praticola*, *longiradius*, p. 60, spp. n., Deutschl., KIEFFER Bull. Soc. Metz 27.—*T. pallidissimus* p. 358, *glabripennis* p. 359, spp. n., Seychelles, KIEFFER Tr. Linn. Soc. 14.—*T. viridis*, *hirtipes*, p. 168, *lasiopterus*, *confundendus*, p. 169, *adjacens*, *semiglaber*, p. 170, *macrochirus*, *nocturnus*, *nocticola*, p. 171, *leptogastus*, *lasiopus*, p. 172, spp. n., KIEFFER Rec. Ind. Mus. 6.—*T. sinarum* sp. n. Yunnan, KIEFFER p. 28 T.c. *T. dissimilis*, *partheno-*

genesis p. 3, JOHANNSEN Agric. Exp. Sta. Maine. Bull. 187.

Tendipes falciger, p. 21, *cornix* p. 22, *nymphoides* p. 25, *stagnorum*, *urbanus*, p. 26, *coarctatus* p. 27, *liebeli* p. 28, *corax* p. 30, *subulatus* p. 32, *rhyparobius* p. 30, *dichromocerus* p. 34, *indivisus* p. 35, *thummi* p. 36, *stagnicola* p. 38, *stricticornis* p. 39, *nympha* p. 40, spp. n., *viridis* var. n. *melanosema* p. 39, Deutschl., KIEFFER Bull. Soc. Metz 27.—*T. atrifurca* p. 27, *sinensis*, *browni*, p. 28, Yunnan, spp. n., KIEFFER Rec. Ind. Mus. 6.—*T. melanothorax*, *digraphis*, p. 335, *choricus* p. 336, *himalayanus* p. 337, *fulvescens*, *polius*, *nepalensis*, p. 339, *macroscelus* p. 340, *stictogaster*, *rufescens*, p. 341, *sessilis* p. 342, spp. n., India, KIEFFER T.c.

Thienemanniella subg. n. vide *Coryno-neura*.

Trichocladus sinuosus, *curvinervis*, *pictimanus*, *fallax*, p. 185, *atrimanus* with var. *albicinctus*, *algarum*, *glauciventrif*, *prasiogaster*, *barbatiforceps*, *nympha*, *proximus*, p. 186, *nigriceps* p. 187, spp. n., Germany, KIEFFER Bull. Soc. ent. France 1911.—*T. marinus* sp. n. Norwegen, ALVERDES p. 58 Zs. wiss. Insektbiol. 7.—*T. spitzbergensis* Spitzbergen, *flexinervis* Bären-Insel, spp. n., KIEFFER & LUNDBECK p. 272 König Avifauna Spitzbergensis.—*T. quadrifasciatus* sp. n. Seychelles, KIEFFER p. 360 Tr. Linn. Soc. 14.—*T. spatulicornis* sp. n. Bengal, KIEFFER p. 177 Rec. Ind. Mus. 6.—*T. pentazonus* p. 345, *oriplanus* p. 346, spp. n., Himalaya, KIEFFER T.c.

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Culicelsa westralis p. 130, *uniformis* p. 131, *similis* p. 132, *queenslandis* p. 179, spp. n., Australia, STRICKLAND T.c.

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Danielsea pagei sp. n. p. 128 Philippines, LUDLOW Psyche 18.

Diceromyia gen. n. near *Newsteadina*, *africana* sp. n. Sobat Riv. pl. x, THEOBALD p. 151 Rep. Wellcome Lab. 4 B.

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PSYCHODIDAE.

Parabrunettia gen. n., *albohumeralis*, p. 311, 9-notata p. 313, *flavicollis*, *longichaeta*, p. 314, spp. n., India and Ceylon, BRUNETTI Rec. Ind. Mus. 4.

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BLEPHAROCERIDAE.

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Atypophthalmus **gen. n.**, *holopticus* **sp. n.** Calcutta, BRUNETTI p. 273 Rec. Ind. Mus. 6.

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Libnotes punctipennis p. 35, *nervosa* p. 36, *forcipata* p. 38, *rufa* p. 39, **spp. n.**, Java, DE MEYERE T.c.

Limnobia parietina, ALEXANDER Ent. News 22 p. 85.

Limnophila opaca **sp. n.** Java, DE MEYERE Tijdschr. Ent. 54 p. 52.—*L. similis* p. 195 ff. 4 & 8, *noveboracensis* p. 196 f. 3, *L. (Prionolabis) simplex* p. 198 f. 10, **spp. n.**, U.S., ALEXANDER Psyche 18.

Molophilus bicolor **sp. n.** Java, DE MEYERE Tijdschr. Ent. 54 p. 45.

Mongoma; merged in *Trentepohlia*, EDWARDS p. 63 Ann. Nat. Hist. 8.

Mongomioides **gen. n.** type *Limnobia trentepohlii*, BRUNETTI p. 296 Rec. Ind. Mus. 6.

Orimarga borneensis **sp. n.** Borneo, BRUNETTI p. 280 T.c.

Ormosia apicalis **sp. n.** Georgia p. 200 f. 6, ALEXANDER Psyche 18.

Pachyrhina dorsopunctata p. 265, *consimilis* p. 266, **spp. n.**, India, BRUNETTI Rec. Ind. Mus. 6.

Paracladura **gen. n.** p. 286, *gracilis* p. 287, *elegans* p. 288, **spp. n.**, Darjeeling, BRUNETTI T.c.

Paramongoma **gen. n.** type *Cylindrotoma albitarsis* Dol., BRUNETTI p. 295 T.c.

Phylodorea subcostata **sp. n.** New York, ALEXANDER p. 287 Canad. Ent. 43.

Polymera georgiae Georgia p. 199 f. 5, ALEXANDER Psyche 18.

Pselliophora bifascipennis Shanghai, *divisa* India, *serraticornis* Ceylon, *immaculipennis* Assam, *terminalis* Tonkin, **spp. n.**, BRUNETTI Rec. Ind. Mus. 6.

Ptychoptera distincta, tibialis, atritarsis, **spp. n.**, India, BRUNETTI pp. 234–235 T.c.

Rhipidia javanensis **sp. n.** Java, DE MEYERE Tijdschr. Ent. 54 p. 31.

Sacandaga **gen. n.** p. 349, *flava* **sp. n.** New York p. 351 ff. 1–3, ALEXANDER Ent. News 22.

Styringomyia = (*Idiophlebia* Gr.) p. 283, *didyma* Grimsh. = (*I. pallida* Gr.) p. 284, EDWARDS Ann. Nat. Hist. 8.—*S. ceylonica* **sp. n.** Ceylon, EDWARDS p. 62 T.c.—*S. obscura* p. 300, *flava* p. 301, **spp. n.**, India, BRUNETTI Rec. Ind. Mus. 6.

Teucholabis cyanea **sp. n.** Ceylon, EDWARDS p. 61 Ann. Nat. Hist. 8.

Thripticomys longivena **sp. n.** Ceylon, EDWARDS p. 59 T.c.

Tipula majestica p. 248, *fulvolateralis* p. 249, India, *fumifasciata* China, *fumipennis* Darjiling, p. 250, *pluto* Tonkin, p. 251, *cinerea* Lombok, *flava* p. 252, *himalayensis* p. 253, *robusta* p. 254, *elegans* p. 255, *interrupta* p. 256, *nigroapicalis* p. 257, *ornatithorax* p. 258, Himalaya, *sciariiformis* Tonkin, *demarcata*, p. 259, *ochripes* p. 260, Ceylon, *divisa* p. 261, *gracilis* p. 262, Darjiling, **spp. n.**, BRUNETTI Rec. Ind. Mus. 6.—*T. cinctipes* p. 64 Borneo, *gedehana* p. 66, *cinereifrons*, *inconspicua*, Java, **spp. n.**, DE MEYERE Tijdschr. Ent. 54.—*T. sayi* n. n. for *costalis* Say p. 194, ALEXANDER Psyche 18.—*T. olia* p. 161 fig., *madera* p. 162, *newcomeri* p. 163, *coloradensis* p. 164, *rohweri* p. 165, **spp. n.**, N. America, DOANE Psyche 18.—†*T. tulamoena* **sp. n.** p. 123 f. 31 Tertiary Canada, HANDLIRSCH Contr. Canad. Pal. Ins. 2.

Toxorhina = (*Neoceratocheilus* Wesch ), EDWARDS p. 280 Ann. Nat. Hist. 8.

RHYPHIDAE, incl. DIXIDAE.

Dixa montana p. 265, *maculipennis* p. 266, *ochrilineata* p. 267, *bistriata* p. 268, *bifasciata* p. 269, **spp. n.**, India, BRUNETTI Rec. Ind. Mus. 4.

Rhyphus pulchricornis p. 260, *distinctus* p. 262, *divisus* p. 263, **spp. n.** India, *fenestralis* var. n. *indicus* p. 261, BRUNETTI T.c.—*R. flavipes* **sp. n.** Java, DE MEYERE Tijdschr. Ent. 54 p. 259.

STRATIOMYIDAE.

The *Stratiomyidae* of Cedar Point,
FULTON Ohio Nat. 11 pp. 299–301.

Eupachygaster gen. n. for *P. tarsalis*,
KERTÉSZ p. 31 Mem. Congr. internat.
Ent. 1.

Evaza javanensis sp. n. Java, DE
MEYERE Tijdschr. Ent. 54 p. 274.

Nemotelus atriceps ♂, BECKER p. 72
Wien ent. Ztg. 30.

Nothomyia viridis sp. n. Ohio, HINE
Ohio Nat. 11 p. 301 fig.

Odontomyia luteiceps p. 267 Borneo,
aurata p. 268 Java, spp. n., DE MEYERE
Tijdschr. Ent. 54.

Pachygaster; composition, KERTÉSZ
p. 50 Mem. Congr. internat. Ent. 1.—*P.*
crassisetia sp. n. Java, DE MEYERE Tijd-
schr. Ent. 54 p. 269.

Pycnomalla aterrima sp. n. Algier
SACK p. 146 Ent. Zs. 25.

Stratiomyia anubis, larvae, CROS
Feuille jeunes natural. 41 pp. 99–103.

TABANIDAE.

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figures of numerous species, KING Rep.
Wellcome Lab. 4 B pp. 112–125 pls. i–
v.

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Leone, PEARSE J. Army Med. Corps
16 1911 pp. 453–456.

Notes on the life-histories of *Tabani-*
dae, BRIMLEY Ent. News 22 p. 133.

Tabanidae, Lebensweise, etc., und
Bekämpfung 5-te Aufl. (Russ.), PORT-
SCHINSKY Trd. b. entom. učen. kom.
Gl. Upr. Zeml. St. Peterburg 2 8
pp. 1–55 figs. 1–21.

Bombylomyia splendens sp. n. Brazil,
LUTZ p. 69 pl. iv f. 3 Mem. Inst.
Oswaldo Cruz 3.

Chrysops neavei Africa sp. n., AUSTEN
p. 275 Bull. Ent. Res. 1.—*C. magnifica*
p. 161, with var. *inornata* p. 163,
centurionis p. 164, *cana* p. 166, figs.,
spp. n., Africa, AUSTEN Bull. ent. Res.
2.—*C. designata* India sp. n., RICARDO
p. 383 Rec. Ind. Mus. 4.—*C. v. nigrum*,
testaceicallosus, p. 297, Java, spp. n.,
DE MEYERE Tijdschr. Ent. 54.—*C.*
omissus p. 76 pl. iv f. 9, *nigricorpus*
p. 77 f. 10, *parvifascia* p. 78 f. 11,

bulbicornis p. 79 f. 12, spp. n., Brazil,
LUTZ Mem. Inst. Oswaldo Cruz 3.

Chrysosona schoutedeni Congo sp. n.,
SURCOUF p. 89 Rev. Zool. Afric. 1.

Corizoneura longirostris varipes subsp.
n., RICARDO p. 367 Rec. Ind. Mus. 4.

Diatomineura virgata p. 277, *neavei*
p. 279, *inornata* p. 282, Africa, spp. n.,
AUSTEN Bull. Ent. Res. 1.

Dichelacera robiginosa sp. n. Guiana,
SUMMERS p. 214 Ann. Nat. Hist. 7.

Dorcaloemus auricomus p. 286, *can-*
didolimbatus p. 288, Africa, spp. n.,
AUSTEN Bull. Ent. Res. 1.

Esenbeckia neglecta p. 72, *matto-*
grossensis p. 74 pl. iv f. 7, *inframaculata*
p. 75 f. 6, spp. n., Brazil, LUTZ Mem.
Inst. Oswaldo Cruz 3.

Erephopsis nubiapex p. 66 pl. iv f. 1,
soledadei p. 67, *albitaeniata* p. 68 f. 4,
florisuga p. 80, Brazil, spp. n., LUTZ
T.c.

Goniops chrysocoma life history;
larvae pl. ii, pupa pl. iii, McATEE
Proc. Ent. Soc. Washington 13 pp.
21–29.

Haematopota dissimilis p. 331, *validi-*
cornis p. 333, *annandalei* p. 335, *assam-*
ensis p. 343, *sinensis* p. 345, *marginata*
p. 347, *bilineata* p. 350, *latifascia* p. 356,
fasciata, *inconspicua*, p. 358, *im-*
maculata p. 359, India, spp. n., pls. xvi–
xviii, RICARDO Rec. Ind. Mus. 4.—*H.*
maculata p. 283, *tuberculata* p. 284,
Java, spp. n., DE MEYERE Tijdschr.
Ent. 54.

Laphriomyia gen. n., *mirabilis* sp. n.
Brazil pl. iv f. 5, LUTZ p. 71 Mem. Inst.
Oswaldo Cruz 3.

Neotabanus gen. n., *ceylonicus* sp. n.,
India, RICARDO p. 363 Rec. Ind. Mus.
4.

Pangonia infusca Africa sp. n.,
AUSTEN p. 283 Bull. Ent. Res. 1.—*P.*
nana Walk., hab., ♀, LUTZ p. 81 Mem.
Inst. Oswaldo Cruz 3.

Rhinomyza umbraticola Africa sp. n.,
AUSTEN p. 289 fig. 4 Bull. Ent. Res. 1.

Silvius indianus India sp. n., RICARDO
p. 374 Rec. Ind. Mus. 4.

Tabanus kingi Sudan sp. n., AUSTEN
p. 291 fig. 1 Bull. Ent. Res. 1.—*T.*
nitidus Congo sp. n., SURCOUF p. 87
Rev. Zool. afric. 1.—*T. camelarius* p.

173, *mordax* p. 175, *spp. n.*, Sudan, AUSTEN Bull. ent. Res. 2.—*T. gedoelsti* *sp. n.* p. 32, *fasciatus nigripes* var. n. p. 30, Congo, SURCOUF Rev. Zool. afric. 1.—*T. rarus* p. 128, *hirtipalpis* p. 129, *flavicinctus* p. 130, *bicinctus* p. 132, *sexcinctus* p. 133, *non-optatus* p. 140, *pratti* p. 143, *albofasciatus* p. 146, *speciosus* p. 157, *hirtistriatus* p. 158, *brunnipennis* p. 160, *auristriatus* p. 161, *puteus* p. 165, *stantoni* p. 174, *indianus* p. 175, *malayensis* p. 178, *dissimilis* p. 180, *significans* p. 182, *fuscomaculatus* p. 183, *discrepans* p. 185, *flavithorax* p. 201, *tinctothorax* p. 202, *perakiensis* p. 204, *inobservatus* p. 205, *flavissimus* p. 207, *atrohirtus* p. 209, *siamensis* p. 212, *diversifrons* p. 214, *subcinerascens* p. 215, *uniformis* p. 218, *T. (Theriopectes) subcallosus* p. 227, *wyvillei* p. 229, *adjacens* p. 248, Indian region, *T. fuscicornis* p. 144, *negativus* p. 137, *formosiensis* p. 220, Formosa, *tuberculatus* Assam p. 220, *cyprianus* Cyprus and W. Asia p. 248, *persis* Persia p. 251, *niyajima* Japan p. 250 *spp. n.*, RICARDO Rec. Ind. Mus. 4.—*T. exsul*, *atratus*, pp. 181–183 figs., GARMAN Agric. Exp. Sta. Kentucky Bull. No. 151.—*T. agrestis*, SURCOUF Bull. Mus. Paris 17 p. 63.

LEPTIDAE.

Variationserscheinungen im Flügelgeader von *Leptis vitripennis*; KLEINE Berliner ent. Zs. 55 pp. 193–202 Taf.

Atherix furcata p. 293, *lucens* p. 294, *spp. n.*, Java, DE MEYERE Tijdschr. Ent. 54.

Chrysopilus opacifrons p. 288, *decoratus* p. 290, *ungaranensis* p. 291, *spp. n.*, Java, DE MEYERE T.C.

Leptis incurvatus p. 291, *arcuatus* p. 292, *spp. n.*, Java, DE MEYERE T.C.

†*Symphoromyia subtrita* *sp. n.* Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 78 pl. iii f. 2.

THEREVIDAE.

Bestimmungstabelle und Beschreibung der süd- und mittelamerikanischen Gattungen und Arten, KRÖBER Ann. Mus. Hung. 9 pp. 475–529.

Anabarrhynchus griseus, *hermanni*, *maculifrons*, *spp. n.*, Chile, KRÖBER pp. 484–488 T.C.

Ectinorrhynchus fascipennis *sp. n.* Brasilia, KRÖBER pp. 483–484 T.C.

X *Furcifera* *gen. n.* verwandt mit *Psilocephala*, *fascipennis* Brasilia, *longicornis* Peru, *polita* Paraguay, *spp. n.*, KRÖBER pp. 524–527 T.C.

Phycus analis Paraguay, *beckeri* Peru, *bicolor* Bolivia, *rufiventris* Paraguay, *spp. n.*, KRÖBER pp. 480–483 T.C.

Psilocephala antennata Chile, *atra* Argentinien, *bezzii* Peru, *brunnipes* Chile, *femorata* Paraguay, *fraterna* Brasilia, *gracilis* Peru, *interrupta* Chile, *longiventris* Paraguay, *obliquefasciata* Costa Rica, *ornata* Paraguay, *ornatifrons* Peru, *parvula* Bahia, *pygmaea* St. Thomas, *quadrifasciata* Venezuela, *ruficornis* Chile, *schroederi* Costa Rica, *spp. n.*, KRÖBER pp. 496–523 T.C.

Thereva diversipes *sp. n.* Brasilia, KRÖBER pp. 490–496 T.C.

ASILIDAE.

Allocotasia annulata p. 310, *minor* p. 311, *nigra* p. 312, *spp. n.*, Java, DE MEYERE Tijdschr. Ent. 54.

Andrenosoma albopilosum *sp. n.* p. 310, VILLENEUVE Bull. Mus. Paris 1911.

†*Asilus amelantheris* *sp. n.* Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 79.

Atomosia punctulosa *sp. n.* Java, DE MEYERE Tijdschr. Ent. 54 p. 307.

Clariola javana *sp. n.* Java, DE MEYERE p. 309 T.C.

Emphysomera hageni *sp. n.* Sumatra, DE MEYERE p. 315 T.C.

Epitriptus senex tibialis n. var. p. 180, VILLENEUVE Bull. Soc. ent. France 1911.

Erax argentifrons p. 308, *truncatus*, *pallidulus*, p. 309, *argyrosoma*, *inflatus*, p. 310, *nemoralis* p. 311, *spp. n.*, N. America, HINE Ohio Nat. 11.

Laphria dispar *sp. n.* U.S., BANKS p. 130 Canad. Ent. 43.—*L. benardi* *sp. n.* p. 309, VILLENEUVE Bull. Mus. Paris 1911.

Machimus diagonalis, Synonymie, VILLENEUVE p. 87 Wien ent. Ztg. 30.—*M. rusticus*, *spinifemoratus* n. var. p.

179. *VILLENEUVE* Bull. Soc. ent. France 1911.

Mallophora fulva sp. n. Arizona, BANKS p. 130 Canad. Ent. 43.

Ommatius argentatus p. 317, *strigatipes*, *calvus*, p. 318, spp. n., Java, DE MEYERE Tijdschr. Ent. 54.—*O. maculatus* p. 128, *pretiosus* p. 129, spp. n., Arizona, BANKS Canad. Ent. 43.

Proctacanthus caudatus Mexico, *occidentalis*, p. 159, *coquilleti*, U.S., *duryi*, p. 160, U.S., *nigrofemoratus* Mexico p. 161, spp. n., HINE Ann. Ent. Soc. Amer. 4.

Promachus sackeni p. 166, *nigripes* p. 170, *aldrichi*, *minusculus*, p. 171, *giganteus* p. 172, spp. n., United States, HINE T.C.

Saropogon weissii sp. n. p. 316 Tunisie, BEZZI Bull. Mus. Paris 1910.

Stenopogon denudatus, ♀ p. 74, *gruenbergi* sp. n. Andalusien p. 75, BECKER Entom. Ztg. Wien 30.

†*Taracticus renovatus* sp. n. Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 80.

BOMBYLIIDAE.

Empidideicus hungaricus sp. n. Hungary, THALHAMMER Ann. Mus. Hung. 9 p. 388.

Hyperalonia sumatrensis p. 296, Sumatra, *paludosa* p. 297, *curvata* p. 298, Java, spp. n., DE MEYERE Tijdschr. Ent. 54.

†*Megacosmus secundus* sp. n. Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 80.

Phthiria aldrichi, GRAENICHER Bull. Wisconsin. Soc. 9 p. 68.

Systoechus candidulus, GRAENICHER p. 67 T.C.

NEMESTRINIDAE.

Symmictus costatus and *Dicrotrpyana flavopilosa*, one species, variation, ARIAS pp. 560–566 Bol. Soc. españ. 11.

EMPIDAE.

Clinocera; Lebensweise der Arten und Bestimmungstabelle der Untergattungen, CSIKI Rovart. Lap. 18 p. 65–68.—*C. barbatula* Diptère am-

phibie, BROCHER Bull. Soc. Zool. Genève 1 1908 pp. 115–117.

Drapetis lutea p. 332, *binotata*, *strigifera*, p. 333, spp. n., Java, DE MEYERE Tijdschr. Ent. 54.

Elaphropeza palpata p. 330, *lineola* p. 331, spp. n., Java, DE MEYERE T.C.

Empis abbrevinervis sp. n. Java, DE MEYERE p. 328 T.C.

Hemerodromia orientalis sp. n. Java, DE MEYERE p. 330 T.C.

Hybos pallipes p. 323, *setosa* p. 324, spp. n., Java, DE MEYERE T.C.

†*Microphorus defunctus* sp. n. Tertiary Canada, HANDLIRSCH p. 124, figs. 32 & 33 Contr. Canad. Pal. Ins. 2.

Parahybos infuscatus p. 326, *pusillus* p. 327, spp. n., Java, DE MEYERE Tijdschr. Ent. 54.

Syneches semibrunnea sp. n. Java, DE MEYERE p. 325 T.C.

DOLICHOPIDAE.

Diostracus olga sp. n. Idaho p. 71 pl. viii ff. 15–18, ALDRICH Psyche 18.

Dolichopus jugalis sp. n. Colorado p. 106, TUCKER Trans. Kansas Acad. 23–24 p. 105.

Hydrophorus gratiosus p. 49, *plumbeus* p. 50, *intentus* p. 51 pl. viii f. 4, *phoca* p. 63 f. 2, *extrarius* p. 65, *altivagus*, *amplectens*, p. 67 ff. 8 & 13, *pensus* p. 68 f. 7, spp. n., N. America, ALDRICH Psyche 18.

PHORIDAE, THAUMATOXENIDAE.

Aphiochaeta aemula, *atriclava*, *chipensis*, *curva*, *flaviclava*, *insulana*, *latifrons*, *meracula*, *nana*, *ochracea*, *recta*, *sauteri*, *trivialis*, *Formosa*, spp. n., BRUES Ann. Mus. Hung. 9 pp. 540–557 figs. 5–17.—*A. circumsetosa* sp. n. Java, DE MEYERE Tijdschr. Ent. 54 p. 348.—*A. xantippe* sp. n. Virginia p. 212 f. 1, and myriopod, BANKS Proc. Ent. Soc. Washington 13.—*A. rufipes*, larval habits; WOOD p. 69 Ent. Mag. 47, WALDEN Rep. Connecticut Agric. Exp. Sta. 34 pp. 693–696 ff. 15–17.

Chonocephalus mexicanus sp. n. Mexico, SILVESTRI Boll. Lab. Zool. Portici 5 p. 172 2 figs.

Conicera formosensis sp. n. Formosa, BRUES Ann. Mus. Hung. 9 p. 539 fig. 6.

Eutermiphora gen. n. near *Termitoxenia*, *abdominalis* sp. n. New South Wales, LEA Proc. R. Soc. Vict. 24 pp. 76-77 pl. xxiv.

Gymnophora colona sp. n. Paraguay, BRUES Ann. Mus. Hung. 9 p. 441.

Hypocera insperata sp. n. Paraguay, p. 438, *suspecta* sp. n. Formosa p. 537 fig. 5, BRUES Ann. Mus. Hung. 9.

Myrmomyia gen. n. *brachymyrmecis* sp. n. Messico, SILVESTRI Boll. Lab. Portici 5 p. 175 2 figs.

Phora meridionalis sp. n. Paraguay, BRUES Ann. Mus. Hung. 9 p. 437.—*P. conventa*, *egregia*, *fasciventris*, *mordax*, Formosa, spp. n., BRUES pp. 530-537 figs. 1-4 T.c.—*Phora*; morphologie larvaire, KELIN Bul. sci. France-Belgique 45 pp. 27-88 fig.—*P. maculata* parasite de *Gelechia maculatella*?, KELIN Feuille jeunes natural. 41 p. 150.

Puliciphora kerteszi sp. n. Formosa, BRUES Ann. Mus. Hung. 9 p. 557 figs. 18-19.—*P. incerta* sp. n. Messico, SILVESTRI Boll. Lab. Zool. Portici 5 p. 174 1 fig.

Termitoxenia; Lebensweise, Anatomie, MICHL p. 53 etc. Mitt. Ver. Univ. Wien 9.

PLATYPEZIDAE.

Verwandschaft, DE MEYERE Tijdschr. Ent. 54 pp. 241-254.

Platypeza infumata, Metamorphose, DE MEYERE pp. 241-254 pl. T.c.

†*Eucallimya* gen. n., *fortis* sp. n. Colorado Miocene, COCKERELL Bull. Amer. Mus. 30 p. 82 pl. iii f. 4.

PIPUNCULIDAE.

Pipunculus confraternus Banks p. 285, *alternatus* p. 286, *semifasciatus* p. 288, *caudatus* p. 289, *discolor* Banks p. 290, *affinis* Quebec p. 283, *P. aequus* p. 292, *minor* p. 293, *appendiculatus* p. 296, *acuminatus* p. 297, *mainensis* p. 298, *viduus* p. 301, *femoratus* p. 302, *brevis* p. 303, *angus*, *sororius*, p. 305, *alpinus* p. 306, *constrictus* Banks p. 306, *luteicornis* p. 307, *varius* p. 309, *tarsalis* Banks p. 309, *atramontensis* Banks p.

312, *subnitens* p. 316, *scoparius* p. 317, *proximus* p. 318, *unguiculatus*, *appendipes*, p. 319, *albiseta* Florida p. 318, *bidens* California p. 320, spp. n., figs., CRESSON Trans. Amer. Ent. Soc. 36.

SYRPHIDAE.

Life-histories of Syrphidae; METCALF Ohio Nat. 12 pp. 397-404 pl. xix.

Notes on the genera proposed by Billberg, Enumeratio Insectorum, JOHNSON Psyche 18 p. 73.

Neue und wenig bekannte Syrphiden des palaearktischen Faunengebietes; SACK Beil. z. Progr. d. Wöhler-Realgymn. in Frankfurt a. M.

Calliprobola aurea sp. n. Transkaspien, SACK p. 28 Beil. Progr. Gymn. Wöhler 1910.

Chilosia helvetica Rhone valley p. 107, *rodgersii* Algeria p. 199, spp. n., WAINWRIGHT Ent. Mag. 47.—*C. longicornis*? Fundort, *similis* Schlesien, spp. n., MICHL Verh. ZoolBot. Ges. Wien 61 pp. 287-293.

Criorhina (*Penthesilia*) *nigriventris* sp. n. p. 318 pl. ix Pennsylvania, WALTON Ent. News 22.

Didea fuscipes life history pp. 337-341 pl. xvi, METCALF Ohio Nat. 11.

Eristalis nigroscutatus p. 337, *ferrugineus* p. 339, *neptunus* p. 340, *lucilia* p. 341, *tristriatus* p. 342, spp. n., Java, DE MEYERE Tijdschr. Ent. 54.—*E. gypseisquama* var. n. *sulfurata* W.-Afr., SPEISER p. 240 Jahrb. Ver. Wiesbaden 64.—*E. oestraceus* = (*Syrphus oestriiformis* Walk.), AUSTEN p. 63 Ent. Mag. 47.—*E. aeneus*, larval habits, LAMB p. 215 Ent. Mag. 47.

Graptomyza jacobsoni p. 343, *flavipes* p. 344, spp. n., Java, DE MEYERE Tijdschr. Ent. 54.

Helophilus; revision, BECKER Berliner Ent. Zs. 55 pp. 213-232.—*H. purehuensis* Purehurehu p. 125, *cargilli* Mount Cargill p. 126, spp. n., MILLER Tr. N. Zeal. Inst. 43.

Mallota bicolor, *eristaliformis*, Ussuri, *auricoma* Altai, spp. n., SACK pp. 35-37 Beil. Progr. Gymn. Wöhler 1910.

Microdon laetus p. 319 pl. ix, WALTON Ent. News 22.

Milesia fissipennis sp. n. Formosa, SPEISER p. 241 Jahrb. Ver. Wiesbaden 64.

Spilomyia maxima Usuri, *sulphurea*, *annulata* Pamir, spp. n., SACK pp. 18-20 Beil. Progr. Gymn. Wöhler 1910.

Syrphus formosanus sp. n. Tainan, MATSUMURA p. 140 Mem. Soc. ent. Belgique 18.—*S. fisherii* sp. n. p. 319 pl. ix Pennsylvania, WALTON Ent. News 22.—*S.*; Larven, KELLER Aus. d. Natur Leipzig 7 pp. 70-74.—*S. torvus* life history pp. 341-344 pl. xvii, METCALF Ohio Nat. 11.

Temnostoma pallidum sp. n. Südl. Amurgebiet, SACK p. 26 Beil. Progr. Gymn. Wöhler 1910.

CONOPIDAE.

Conops acroschistus Kongo p. 243, *larvatus* Erythraea p. 244, spp. n., SPEISER Jahrb. Ver. Wiesbaden 64.—*C. spp.*, GRAENICHER Bull. Wiscons. Soc. 9 p. 70.

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BERYTIDAE.

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trioza medicaginis, *oaxacensis* sp. n.
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 sp. n. British Honduras p. 492, CRAW-
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Idionotus brevipes habits, stridulation, WALKER p. 303 Canad. Ent. 43.

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†*Promastax* gen. n., *archaicus* sp. n. Tertiary Canada, HANDLIERSCH p. 97 Contr. Canad. Pal. 2.

Prumna primnoa Ost-Sibirien Beschreibung, Variieren, Copula p. 258, *primnoides* sp. n. p. 259 pl. v f. 1 Ussuri-Land, IKONNIKOV Ann. mus. zool. 16.

Ptemoblax lemarineli sp. n. Congo, BOLIVAR p. 304 Ann. Soc. ent. Belgique 55.

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Racilia okinawensis sp. n. Formosa, MATSUMURA p. 130 Mem. Soc. ent. Belgique 18.

Sclerotettix gen. n. p. 104, spp. n. *abbreviatus* p. 105, *tibialis* p. 106, *variegatus* p. 107, *infuscatus* p. 107, *minor* p. 109, Brazil, BRUNER Ann. Carnegie Mus. 7.

Sphingonotus coerulans f. n. *intermedia* Deutschl., RAMME p. 9 Berlin ent. Zeitschr. 56.—*S. kittaryi* Unterschiede von *octofasciatus* (Russ.), IKONNIKOV Rev. russ. ent. 11 p. 359.

Stauroderus jacobsoni sp. n. Semi-retshje, IKONNIKOV Rev. russ. ent. 11 p. 351.

Stenobothrus kirgisorum sp. n. Semi-retshje, IKONNIKOV p. 348 T.c.—*S. formosanus* sp. n. Formosa, MATSUMURA p. 130 Mem. Soc. ent. Belgique 18.

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Tettigidea annulipes p. 127, *gracilicornis* p. 128, *chapadensis* p. 130, *hancocki* p. 131, *australis* p. 132, *intermedia* p. 132, *castalis* p. 133, *subaptera* p. 134, *arcuata* p. 135, *corrugata* p. 136, spp. n., Brazil, BRUNER Ann. Carnegie Mus. 7. —*T. australis*, CAUDELL p. 156 Canad. Ent. 43.

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Tmethis stummeri = *muricatus* var. *heptapolamica*, IKONNIKOV Rev. russ. ent. 11 p. 360.

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Tryxalis nasuta, Dichogamie (Russ.), KORSÁKOV Naturfreund St. Petersburg 6 p. 90.

APTERA s.l.

Zur Apterygotenfauna Norwegens, LINNANIEMI Bergens Mus. Aarb. 1911 No. 1.

In 1907 a paper by von OLFERS was recorded as follows:—

“Olfers, E. W. M. von. Die „Ur-Insecten“. (Thysanura und Collembola im Bernstein.) Königsberg Schr. physik. Ges. 48 1907 (1–40 mit 25 Taf.). 2070”

No new genera or species were however mentioned as included in the paper. The German Bureau has now forwarded for inclusion in this Issue a list of new genera and species contained

in the paper, together with the following explanation:—

“Die Arbeit ist aufgenommen in *Paläontol.*, Jg. 1908 und *Zool.*, 1907, aber ohne neue species. Diese sind als solche weder vom Verf. bezeichnet, noch ist sonst aus der Arbeit ersichtlich, dass sie neu sind. Ich habe sämtliche Namen ausgezogen, die mit der Bezeichnung „v. Olf.“ in der Arbeit versehen waren. Die Angabe, dass es sich um Neubenennungen handelt, rührt her von F. Poche im Arch. f. Naturgesch., Berlin, Bd 77, I, suppl. H 4, 1912.—Bedauerlich ist, dass (durch die Schuld des Deutschen Bureaus) die Bezeichnung der Geologischen Schicht im Binde Paläontologie ganz falsch ist, nämlich 90. 95 statt 85. Es handelt sich, wie der Titel sagt, um Bernstein-Insekten.”

THYSANURA s.l.

Ueber Felsenspringer, Machiloidea. 5. Aufsatz: Die schuppenlosen Entwicklungsstufen und die Orthomorphose, VERHOEFF Zool. Anz. Leipzig 38 1911 (524–263).

Allopsontus gen. n. *Machilidae*, *annandalei* sp. n. Indomalesia, SILVESTRI pp. 88–95 Boll. Lab. Portici 5.

Assmuthia escherichii sp. n. Ceylon, in Nestern von *Termes*, SILVESTRI p. 406 Zool. Jahrb. Syst. 30.

Atelura jacobsoni sp. n. in nidis *Termes malayanus* Java, SILVESTRI Boll. Lab. Zool. Portici 5 p. 62 2 figs.

Ditta nom. n. für *Teutonia* Verh., STRAND Entom. Ztg. Wien 30 p. 77.

Evalljapyx gen. n., *sonoranus*, *propinquus*, *diversipleura*, *brevipalpus*, *furciger*, *euryhebdomus*, *heterurus*, *dolichoderus*, Nord-America, spp. n., SILVESTRI p. 72–87 Boll. Lab. Portici 5.

Grassiella praestans Silv., mirmecofila, Messico, SILVESTRI Boll. Lab. Zool. Portici 5 p. 188.

Heterojapyx victoricae sp. n. Australia, SILVESTRI Boll. Lab. Zool. Portici 5 p. 97 2 figs.

Hypomachilodes gen. n., *texanus* sp. n. N. America, SILVESTRI pp. 324–350 Boll. Lab. Portici 5.

Japyx diversiunguis, allodontus, spp. n., SILVESTRI pp. 72-87 Boll. Lab. Portici 5.

Japyx solifugus, habits, BONDROIT Ann. Soc. ent. Belgique 55 p. 8.

†*Klebsia* g. n., *horrens* sp. n. Bernstein Deutschl., OLFERS p. 8 S.G.K. 48 1907.

Lepidospora ceylonica sp. n. Ceylon, SILVESTRI Boll. Lab. Zool. Portici 5 p. 95 fig.

†*Lepisma jubatum* sp. n. Bernstein Deutschl., OLFERS p. 10 S.G.K. 48 1907.

†*Lepismina stricta* sp. n. Bernstein Deutschl., OLFERS p. 10 S.G.K. 48 1907.

†*Lepismodion* g. n., *machilops* sp. n. Bernstein Deutschl., OLFERS p. 16 S.G.K. 48 1907.

Machilellus gen. n. *Machilida, orientalis* sp. n. Indomalesia, SILVESTRI pp. 88-95 Boll. Lab. Portici 5.

Machilellus mexicanus sp. n. N. America, SILVESTRI pp. 324-350 Boll. Lab. Portici 5.

†*Machilis exilis, cineracea, cincta*, p. 12, *zebrina, chlamydophora, capito, signata*, p. 13, *boops, anableps*, p. 14, *exophthalmos, microphthalmos, palae-mon*, p. 15, spp. n., Bernstein Deutschl., OLFERS S.G.K. 48 1907.

Machilis lefroyi Indomalesia sp. n. SILVESTRI pp. 88-95 Boll. Lab. Portici 5.

Machilis strenua sp. n. N. America, SILVESTRI pp. 324-350 Boll. Lab. Portici 5.

†*Machilodes* g. n., *diastatica* sp. n. Bernstein Deutschl., OLFERS p. 11 S.G.K. 48 1907.

Machiloides banksi sp. n. N. America, SILVESTRI pp. 324-350 Boll. Lab. Portici 5.

†*Machilopsis* g. n., *affinis* sp. n. Bernstein Deutschl., OLFERS p. 10 S.G.K. 48 1907.

Macropsontus gen. n. *Machilidae, greeni* sp. n. Indomalesia, SILVESTRI pp. 88-95 Boll. Lab. Portici 5.

Meinertellus jacobsoni sp. n. Indomalesia, SILVESTRI pp. 88-95 Boll. Lab. Portici 5.

Mesomachilis gen. n., *nearcticus* sp. n. N. America, SILVESTRI pp. 324-350 Boll. Lab. Portici 5.

†*Micropa* g. n., *stylifera* sp. n. Bernstein Deutschl., OLFERS p. 9 S.G.K. 48 1907.

Neomachilis gen. n., *halophilus* sp. n. N. America, SILVESTRI pp. 324-350 Boll. Lab. Portici 5.

†*Ocellia* g. n., *articulicornis* sp. n. Bernstein Deutschl., OLFERS p. 7 S.G.K. 48 1907.

Parajapyx grassianus Nord America sp. n., SILVESTRI pp. 72-87 Boll. Lab. Portici 5.

Petrobius californicus, superior, submutans, persquamosus, calcaratus, Nord America, spp. n., SILVESTRI Boll. Lab. Portici 5 pp. 324-350.

COLLEMBOLA.

Entwicklung der Mundwerkzeuge von *Tomocerus plumbeus*, HOFFMANN Zool. Anz. 37 pp. 353-377.

†*Achorutes latidens* sp. n. Bernstein Deutschl., OLFERS p. 27 S.G.K. 48 1907.

†*Anoura stricta* sp. n. Bernstein Deutschl., OLFERS p. 28 S.G.K. 48 1907.

Calistocyrtus gen. n., *indicus* sp. n. Bombay, RITTER Ann. Hofmus. Wien 24 pp. 379-398.

Campylothorax ceylonicus sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379-398.

†*Catastylus* g. n., *calcaratus, crassus, crassicaudatus, nasicornis*, spp. n., Bernstein Deutschl., OLFERS p. 24 S.G.K. 48 1907.

Corynephoria jacobsoni, Bau und Funktion der Dorsalkeule, HOFFMANN Zool. Anz. 38 pp. 382-391.

†*Cuculliger* g. n., *longistylus* sp. n. Bernstein Deutschl., OLFERS p. 24 S.G.K. 48 1907.

Cyphoderus dimorphus sp. n. ospite nel nido di *Trigona Mexico*, SILVESTRI Boll. Lab. Zool. Portici 5 p. 68 2 figs.

†*Degeeria robusta, jubata, signata, gracilis, obesa*, spp. n., Bernstein Deutschl., OLFERS p. 20 S.G.K. 48 1907.

Drepanura punctata Bombay, *uzeli* Ceylon, spp. n., RITTER Ann. Hofmus. Wien 24 pp. 379–398.

Entomobrya florulenta sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Isotoma acuticauda, falcicaudata, larvata, hirta*, spp. n. Bernstein Deutschl., OLFFERS pp. 25–26 S.G.K. 48 1907.

Lepidocyrtus caeruleus sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Lipura longipes* sp. n. Bernstein Deutschl., OLFFERS p. 26 S.G.K. 48 1907.

Neanura dubiosa sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Omophora g. n., tricuspidata* sp. n. Bernstein Deutschl., OLFFERS p. 21 S.G.K. 48 1907.

Oncopodura crassicornis sp. n. England, SHOEBOTHAM p. 34 pl. iii Ann. Nat. Hist. 8.

†*Orchessella concolor* sp. n. Bernstein Deutschl., OLFFERS p. 21 S.G.K. 48 1907.

†*Palpigerida g. n., longicollis, crassula*, spp. n., Bernstein Deutschl., OLFFERS p. 19 S.G.K. 48 1907.

†*Palpigerina g. n., sminthuroides, elongata*, spp. n., Bernstein Deutschl., OLFFERS p. 19 S.G.K. 48 1907.

†*Papirius verrucosus, brevicaudatus*, spp. n., Bernstein Deutschl., OLFFERS p. 30 S.G.K. 48 1907.

Peliolepisma gen. n., calva sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Polystylus g. n., quinquecaudatus* sp. n. Bernstein Deutschl., OLFFERS p. 24 S.G.K. 43 1907.

Proisotoma ultonica sp. n. Antrim, CARPENTER p. 83 Irish Nat. 20.

Pseudosira bidenticulata sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

Pterikrypta gen. n., sulcata fasciata, Ceylon, spp. n., RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Seira pachysceles* sp. n. Bernstein Deutschl., OLFFERS p. 21 S.G.K. 48 1907.

†*Sminthurus longipes, gracillimus, crassicaudatus, cristatus, longidens*, spp. n., Bernstein Deutschl., OLFFERS p. 29 S.G.K. 48 1907.

Sminthurus parvulus, serratus, Ceylon, spp. n., RITTER Ann. Hofmus. Wien 24 pp. 379–398.

†*Stylonotus g. n., lanuginosus* sp. n. Bernstein Deutschl., OLFFERS p. 20 S.G.K. 48 1907.

†*Triacnura g. n., cornuta* sp. n. Bernstein Deutschl., OLFFERS p. 26 S.G.K. 48 1907.

†*Xenylla inermis* sp. n. Bernstein Deutschl., OLFFERS p. 28 S.G.K. 48 1907.

Xenylla pseudobrevicauda sp. n. Ceylon, RITTER Ann. Hofmus. Wien 24 pp. 379–398.

PROTURA.

Ueber die systematische Stellung der *Protura* Silvestri, RIMSKY-KORSAKOW Zool. Anz. 37 pp. 164–168.

Protura; Organisation, systematische Stellung, Vorkommen in Schweden, TRÄGÅRDH Entomol. Tidskr. 32 pp. 189–200.

Protura; Verbreitung, Bewegungen, Nahrung. RIMSKI-KORSAKOV Rev. russ. ent. 11 pp. 411–417 ff. 1–3.

Protura; Anatomie (Russ. + deutsch. Rés.), RIMSKY-KORSAKOW St. Petersburg Trav. Soc. nat. C. r. séances 42 1911 pp. 17–37 96–98 8 Textf.

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ERRATUM.

P. 241—delete altogether the first entry "*Lachnodiella*" etc.; it is correctly placed elsewhere.

PR

XIII. PROCHORDATA

incl. ENTEROPNEUSTA

ARRANGED BY

I. B. J. SOLLAS

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT-INDEX	3
General	3
Structure	3
Physiology	3
Development	3
Ethology	3
Evolution	3
Geography	3
III. SYSTEMATIC INDEX	4
Tunicata	4
Cephalochordata (vacant)	
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GENERAL.

Tunicata (Manteltiere); **Hartmeyer, 10, 13a.**

Tunicata (Manteltiere); **Neumann, 21.**

Acrania, Tunicata u. aberrante Würmer für 1909, Jahresberichte; **Schepotieff u. Hartmeyer, 30.**

STRUCTURE.

Nuovo organo di senso in Salpidae; **Zodaro, 32.**

PHYSIOLOGY.

Great power of resistance of *Ciona intestinalis*; **Daumézon, 6 and 7.**

Physiologie des Nervensystems und der Bewegung, *Ciona intestinalis*; **Polimanti, 23.**

Untersuchungen über das Blut der Ascidien; **Henze, 15.**

DEVELOPMENT.

Oogenese bei *Ciona intestinalis* und *Clavellina lepadiformis* (Russ.; **Bogojavlenskij, 2.**

Untersuchungen über die Placenta der *Salpa democratica-mucronata*; **Saint-Hilaire, 29.**

Ascidien-larven des Nordischen Planktons; **Lohmann, 19.**

Larva of *Oikopleura dioica* Fol.; **Lohmann, 18.**

Über *Balanoglossus*-Entwicklung; **Heider, 14.**

Entwicklung von *Oikopleura dioica*; **Delsman, 7a.**

ETHOLOGY.

Über das Leuchten von *Pyrosoma elegans* Les.; **Polimanti, 24.**

Quantitative investigation of the plankton of the North Sea; **Mielck, 20.**

Situation que peut affecter le Copépode *Enterocola*; **Brément, 4.**

Nouveau *Ophioseides* parasite des Aplidiens; **Chatton et Brément, 5.**

GEOGRAPHY.

Geographische Verbreitung der Ascidien; **Hartmeyer, 12.**

Atlantic Ocean.

North Sea, Appendiculariae, additions to the list; **Lohmann, 18.**

Arctic Ocean.

Kola Fjörd Ascidia list; **Derjugin, 8.**

Arctic, *Dendrodia* sp. n.; **Bjerkkan, 1.**

Arctic Ascidia, additions to the fauna; **Hartmeyer, 13.**

Antarctic Ocean.

Antarctic Tunicata 3 spp. n.; **Hartmeyer, 9.**

Antarctic, Booth Wandel I., *Tethyum* sp. n.; **Sluiter, 31.**

Cape of Good Hope *Pyura* sp. n.; **Hartmeyer, 9.**

Indian Ocean.

St. Paul I. *Diplosomoides* sp. n.; **Hartmeyer, 9.**

Kerguelen Is., Tunicata 3 spp. n.; **Hartmeyer, 9.**

Pacific Ocean.

Nord-Japanisches Meer, Ascidia 2 spp. n.; **Redikorcev, 25.**

La baie de Pierre le Grand, Tunicata 2 spp. n.; **Ostronmoff & Pavlenko, 22.**

Sea of Ochotsk, *Chelyosoma* 2 spp. n.; **Redikorzew, 26.**

III.—SYSTEMATIC INDEX.**(1) TUNICATA = UROCHORDATA.**

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(2) CEPHALOCHORDATA (vacant).

(3) ENTEROPNEUSTA (vacant)

XIV. VERTEBRATA

(GENERAL)

i.e., complementary to Mammalia, Aves, Reptilia, and Pisces

ARRANGED BY

D. S H A R P

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT INDEX:—	
General = 5203	7
Structure = 5207	7
Physiology = 5211.. .. .	9
Development = 5215	9
Ethology = 5219	9
Variation and Evolution = 5223	10
Geography = 5227	10
Taxonomy = 5231	10

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II.—SUBJECT INDEX.

GENERAL MISCELLANEOUS.

5203

Collezione centrale degli Animali vertebrati italiani in Firenze; Giglioli, **36**.

Farbige Tierbilder; Kuhnert, **56**.

British Museum guide; Pycraft, **83**.

Kulturgeschichte der Nutztiere; Reinhardt, **85**.

African game trails; Roosevelt, **90**.

STRUCTURE. 5207

General.

Revue annuelle d'anatomie; La-guesse, **58**.

Metameria somatica nervosa cutanea e muscolare; Rynberk, **93**.

Caratteri sessuali secondari e le cellule interstiziali del testicolo; Mazzetti, **71**.

Kopfgregion der Amnioten; Fleischmann, **36** and **27**.

Kopfgregion Pharynx; Kriegbaum, **55**.

Kopfgregion, Kehlhlügel (Trachinx) der Amnioten; Schmidt, **95**.

Histology, Chromosomes.

Variations in Chromosomes; Walker, **109**.

Änderungen der Zellgrösse im Zusammenhang mit dem Körperwachstum der Tiere; Plenk, **81**.

Entstehung der Panethschen Zellen; Kull, **57**.

Morphologie des Glykogens des Herzmuskels; Arnold, **1**.

Feinere Strukturen und Anordnung des Glykogens im Magen und Darmkanal; Arnold, **2**.

Bau der Langerhans'schen Inseln (Russ.); Grinev, **40**.

Tegument, Skeleton.

Skelettbau mit dünnen Platten; Gebhardt, **34**.

Unterkiefer der Wirbeltiere; 1. Der Processus anterior (Folii) des Hammers der Säuger und das Goniale der Nicht-säuger; Gaupp, **31**.

Zusammensetzung des Unterkiefers der Quadrupeden; **Gaupp, 32.**

Entstehung eines „sekundären“ Kiefergelenkes bei den Säugern; **Gaupp, 33.**

Die Architektur des Knorpels vor der Osteogenese und in der ersten Zeit derselben; **Romeis, 88.**

Vergleichende Anatomie des menschlichen Gebisses und der Zähne der Vertebraten; **Terra, 105.**

Nervous System and Sense-organs.

Progressi della Nevrologia; **Sterzi, 101.**

Allgemeine Prinzipien der Struktur des Nervensystems (Russ.); **Grimstein, 42.**

Absolute und relative Hirngewicht bei Tieren; **Funk, 29.**

Histogenese des Zentralnervensystems; **Marcora, 70.**

Bauplan des Vertebratenhirns und dessen Kommissursysteme; **Kappers, 54.**

The migrations of the motor root-cells of the vagus group, and the phylogenetic differentiation of the hypoglossus nucleus from the spino - occipital - system; **Ariens Kappers, 4.**

Migrations of motor cells of the bulbar trigeminus, abducens and facialis; **Ariens Kappers, 3.**

Nucleo delle cellule nervose cariocrome e di quelle dette granuli; **Biondi, 8.**

Paranukleolen und hyaline Schollen des Karyoplasma der Nervenzelle; **Biondi, 9.**

Entstehung der Nervenbahnen; **Braus, 10 & 11.**

Morphology and subdivision of the forebrain vesicle; **Johnston, 53.**

Le réseau interne de Golgi des cellules nerveuses des ganglions spinaux; **Legendre, 59.**

Conservation hors de l'organisme des cellules nerveuses des ganglions spinaux; **Legendre et Minot, 60 & 61.**

Les étranglements de Ranvier et les espaces interannulaires des fibres nerveuses à myéline, Discussion Waldeyer; **Nageotte, 73.**

Histologischer Bau der sympathischen Ganglien (Russ.); **Michailov, 72.**

Rapports entre névroglie et cellules et fibres nerveuses; **Paladino, 76.**

Rapporti di continuità tra gli elementi nervosi e intimi rapporti tra essi e la nevroglia; **Paladino, 77.**

Phylogenese des Hypothalamus; **Röthig, 87.**

Sulla nota di F. Tello "La régénération dans les fuseaux de Kühne"; **Ruffini, 92.**

Baue und Funktion der Lamellenkörperchen; **Schumacher, 97.**

Rapporti tra piastre motrici; **Stefanelli, 100.**

Vergleichenden Anatomie des mesencephalen Trigeminusanteils; **Valkenburg, 107.**

Mesencephalic nucleus and root of the N. Trigeminus; **Valkenburg, 108.**

Histologie der Nervenzellen in der weissen Substanz des Rückenmarks (Russ. + deutsch. Rés.); **Nemilov, 74.**

Reticular cells of the oblongata; **Hoëvell, 51.**

Studio del connettivo lamellare; **d'Antona, 15.**

Ricerche istol. e istochimiche sulla retina; **Luna, 65.**

Changements morphologiques dans la rétine par l'action de la lumière; **Chiarini, 14.**

Entstehung des melanotischen Pigmentes im Auge der Wirbeltierembryonen und in Chorioidealsarkomen; **Szily, 104.**

Anatomie comparée de l'appareil de l'accommodation de l'œil; **Grynfeldt, 43.**

Wie akkomodieren die Wirbeltiere?; **Hilzheimer, 50.**

Myology.

Kontinuität der Muskelfibrillen und der Sehnenfibrillen; **Schuitze, 96.**

Circulatory and Respiratory Organs.

Formen der Abzweigungsstellen von Arterien bei den Wirbeltieren; **Dragendorff, 18.**

Valvole del cuore in. Vert. anamni: sviluppo, struttura; **Favaro, 23.**

Tono e bulbo arterioso in Anamni; **Favaro, 24.**

Innervazione del cuore; **Fedele, 25.**

Entwicklung des lymphatischen Systems der Vertebraten vom Standpunkte der Phylogenese des Gefäßsystems; **Huntington, 52.**

Histologische, Plexis chorioidei; **Pellizzi, 80.**

Blood, Lymph.

Vergleichenden Hämozytologie; **Werberg, 114.**

Origin and structure of the plasma cells and the eosinophils of the lung of *Amblystoma*; **Downey, 17.**

Lymphoiden Zellformen des Blutes; **Pappenheim, 78.**

Globules rouges, appareil réticulaire interne; **Sinigaglia, 99.**

Leucocyten und verwandte Zellformen; **Weidenreich, 112 and 113.**

Excretory Organs, Special Glands.

Bau und Histologie der Nebenniere (Russ.); **Dzerzinski, 20.**

Vasi biliari aberranti; **Engel, 21.**

Entstehen und Verschwinden der Lymphdrüsen (Holländisch); **Groot, 41.**

E l'ipofisi organo rudimentale?; **Ronchetti, 89.**

PHYSIOLOGY 5211

Bestimmung des Geschlechts (Russ.); **Basilev, 6.**

Circulation of mixed blood in the embryo; **Pohlman, 82.**

Grössenzunahme der Eier und Neugeborenen mit der Alterszunahme der Mutter; **Halban, 46.**

Allgemeine Prinzipien der Funktion des Nervensystems (Russ.); **Grünstein, 42.**

Das Sehen der Wirbeltiere, speziell der Haustiere; **Tschernak, 106.**

Vergleichenden Accommodationslehre; **Hess, 48 and 49.**

(N-9186 a)

Physiologie der Atembewegungen; **Baglioni, 5.**

Die normale Atemfrequenz unserer Haustiere; **Hepke, 47.**

Funktion der Langerhaus'schen Inseln (Russ.); **Grinev, 40.**

The object and use of tails (Swedish); **Lonnberg, 64.**

DEVELOPMENT. 5215

Der Eibau bei den Wirbeltieren; **Retzius, 86.**

Ameboidismo e secrezioni in rapporto allo sviluppo ontogenico; **Ruffini, 91.**

Le développement du cœur dans la série des Vertébrés; **Weber, 111.**

Circulation of mixed blood in the embryo; **Pohlman, 82.**

Vergleichung des Entwicklung der Trigeninus gruppe; **Belogolowy, 7.**

Sviluppo dei corpi vertebrali e delle loro articolazioni negli Amnioti; **Bruni, 13.**

Primi stadi di sviluppo della colonna vertebrale, Rettili e Uccelli; **Bruni, 12.**

Pharynx; **Kriegbaum, 55.**

Trachinx der Amnioten; **Schmidt, 95.**

Die Zusammensetzung des Unterkiefers der Quadrupeden; **Gaupp, 32.**

Embryonale und postembryonale Entwicklung der Nebenniere (Russ.); **Dzerzinski, 20.**

Munddach der Amnioten; **Fuchs, 28.**

Prime fasi di sviluppo dell'apparato polmonare; **Giannelli, 35.**

Partecipazioni dei condriosomi alla differenziazione cellulare; **Levi, 62.**

Bildung des Pigmentes in der regenerierenden Haut; **Loeb, 63.**

Prime fasi di sviluppo di cellula nervosa; **Marcora, 69.**

ETHOLOGY. 5219

Literature for 1910 on the behaviour of vertebrates; **Watson, 110.**

Animaux hibernants, modifications des cellules nerveuses; **Zalla, 116.**

Psychologie des animaux de chasse; **Maire, 67.**

Mit Blitzlicht und Büchse im Zauber des Eleléscho; **Schillings, 94.**

Geschmackserscheinungen; **Otto, 75.**

Théorie et applications psychologiques du dressage; **Hachet-Souplet, 45.**

AETIOLOGY AND VARIATION. 5223

Selektion und Pathologie; **Duerst, 19.**

Beziehungen zwischen der Geschichte der Haustiere und der Frage der Vererbung erworbener Eigenschaften; **Dettweiler, 16.**

Ancestral features in the blood plasma; **Macallum, 66.**

Fossile lungenatmende Meeresbewohner; **Stromer, 103.**

Phylogenetische Entwicklung der Nebenniere (Russ.); **Dzerzinski, 20.**

Dicephale Doppelbildungen; **Wes-trienen, 115.**

GEOGRAPHY. 5227

North-East-Greenland. Biological observations; **Manniche, 68.**

Tierreste der alten Wohnstätten auf Hardangervidda (Norweg.); **Grieg, 37.**

Die Jagd auf Hardangervidda in prähistorischer Zeit (Norweg.); **Grieg, 38.**

Tweed, Scotland; **Evans, 22.**

Wirbeltiere des Balticum; **Schweder, 98.**

Verzeichnis der Wirbeltierfauna Bielefelds; **Zukgraf, 117.**

Wirbeltierfauna der preussischen Oberlausitz; **Stolz, 102.**

Vertebrati valtelinesi; **Galli-Valerio, 30.**

Higher animal life in Algiers (Swedish); **Gyldenstolpe, 44.**

Les vertébrés aquatiques du Sahara; **Pellegrin, 79.**

Cayuga lake basin N.Y.; **Reed and Wright, 84.**

TAXONOMY. 5231

Pesci, Anfibi, Rettili; **Griffini, 39.**

XV. PISCES

ARRANGED BY

C. TATE REGAN.

CONTENTS

	PAGE
I. TITLES	3
II. SUBJECT INDEX	20
General, Economics, Etc.	20
Structure	20
Physiology	22
Development	23
Ethology	24
Variation and Aetiology	25
Distribution	25
Marine	25
Fresh Water	26
Fossil	27
III. SYSTEMATIC	28
General Works	28
Marsipobranchii	29
Selachii	29
Ichthyodorulites	29
Ichthyotomi	29
Euselachii	29
Pleurotremata	29
Hypotremata	30
Holocephali	30

	PAGE
Pisces	30
Palaeopterygii	30
Neopterygii	31
Protospondyli	31
Ginglymodi	31
Isospondyli	31
Ostariophysi	33
Haplomi	37
Iniomi	37
Apodes	37
Lyomeri	37
Salmo-percae	38
Microcyprini	38
Synentognathi	38
Anacanthini	38
Solenichthyes	39
Berycomorphi	39
Zeomorphi	39
Percomorphi	39
Scleroparei	44
Heterosomata	45
Plectognathi	45
Discocephali	46
Xenopterygii	46
Pediculati	46
Opisthomi	46
Cladistia	46
Rhipidistia	46
Dipneusti	46
Ostracodermi	47
Arthrodira	47

I.—TITLES.

Allen, B. M. The origin of the sex-cells of *Amia* and *Lepidosteus*. J. Morph. Philadelphia Pa. **22** 1911 (1-35) pls. i-iii. **1**

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II.—SUBJECT INDEX.

GENERAL WORKS, ECONOMICS,
Etc. 5403

The fishes of the Indo-Australian Archipelago. I. Index of the ichthyological papers of P. Bleeker; **Weber & Beaufort, 378.**

Nomi dialettali dei principali Pesci di Gallipole; **Franco, 88.**

Ichthyological researches 1909 and 1910 (Icelandic); **Sæmundsson, 295.**

Aus deutscher Fischerei. Red. v K. **Eckstein.** Neudamm (J. Neumann).

Importance of study of marine ecology; **Miner, 205.**

Hydrobiologische und fischereiliche Untersuchungen; **Thienemann, 359.**

Verhältnis von Ernährung und Körperform bei Nutzfischen; **Walter, 375.**

Naturgeschichte der holländischen Seefische **Redeke, 266.**

Die holländischen Versuche mit gezeichneten Zungen; **Redeke, 267.**

Fishery investigations in Greenland in the years 1908 and 1909. (Danish); **Jensen, 149.**

Pesca nel golfo di Napoli.; **Police, 248.**

Pesca nella marina di Fano; **Ferretti, 78.**

Industria della pesca nella marina di Fano; **Ferretti, 79.**

Fischereien von N.-W. Sibirien (Russ.); **Sokolnikov, 325.**

Aufgaben der Fischzucht im Ural (Russ.); **Kučin, 178.**

Poissons des pêcheries de la côte occidentale d'Afrique; **Pellegrin, 241.**

Ueber die Zucht der Goldfischrassen in China; **Kreyenberg, 175.**

Fischkultur auf Java; **Backer, 9.**

Fisheries of New South Wales; **Stead, 330, 331.**

Sprat in Norse waters; **Sund, 349.**

Wanderung der Heringe; **Pettersson, 242.**

Herring dependent on hydrographic and meteorological conditions in Store Bælt; **Otterstrom, 223.**

Results of international Herring investigations; **Hjort & Lea, 134: Lea, 185.**

Geophysikalische, besonders klimatische Beziehungen des Auftretens der Heringsschwärme in der südöstlichen Nordsee; **Krebs, 173.**

Künstliche Aufzucht von Sterlets-Brut (Russ.); **Desnickij, 58.**

Naturgeschichte von *Solea vulgaris*; **Redeke und Tesch, 268.**

Plaice marking; **Farran, 75.**

Cyprinus carpio; cenni biologici e pratici; **Supino, 352.**

Haplochilus grahami and mosquito larvae; **Graham, 109.**

STRUCTURE. 5407

General Anatomy.

Beiträge zur Kenntnis der Panzerwelse; **Rauther, 264.**

Tegumentary System.

Integument von *Cyclopterus lumpus*; **Hase, 123.**

Über den Bau der Epidermis von Haut und Lippen bei *Schizothorax intermedius* und *Capoeta heratensis*; **Pawlowsky, 233.**

Cellule epid. sensorie sparse dei Petro-mizonti; **Razzauti, 265.**

Distribuzione delle papille cutanee nei Gobi; **Sanzo, 299.**

Giftdrüsen einiger Scorpaeniden; **Pawlowsky, 234.**

The lateral line system of *Chimaera coliei*; **Reese, 269.**

Luminous organs of Spinacidae, Sternopychidae and Myctophidae; **Oshima, 221.**

Bau der Platten der *Psammosteidae* (Russ.); **Preobrazensky, 256.**

Scales; **Cockerell, 44, 45, 46, 48, 49, 50, 51.**

Salmon scales; **Johnston, 150.**

Nervous System.

Das Zentral-Nervensystem der Sela-chier; **Burckhardt, 39.**

Die Nervengeflechte der Haie und Rochen; **Braus, 36.**

Das Mormyridenhirn; **Franz, 94.**

Gehirn von *Chimaera monstrosa*; **Kappers** und **Carpentier, 160.**

Das Kleinhirn der Knochenfische; **Franz, 89, 93.**

Die Furchen am Vorderhirn einiger Teleostier; **Kappers, 159.**

Pineal region in Teleosts; **Terry, 358.**

Lymphoid structure over myelencephalon of *Lepidosteus*; **Chandler, 42.**

Gruppierung der Nervenzellen im Fischrückenmark; **Jacobsohn, 146.**

Cellule dei gangli spinali; **Levi, 183.**

Trochlear and oculomotor roots; **Huet, 141.**

Nervus trochlearis bei den Knochenfischen; **Franz, 92.**

Glossopharyngeal in Myxinoids; **Johnston, 151.**

The nervus terminalis in teleosts; **Sheldon** und **Brookover, 316.**

The nervus terminalis in the carp; **Sheldon, 314.**

Die Kiemenbogensnerven der Fische; **Sewertzoff, 313.**

Teleostei, Innervierung des Kopfes (Russ.); **Paušin, 224.**

Muskeln und Nerven der Brustflosse und der Körperwand bei *Acanthias vulgaris*; **Müller, 207.**

Innervation der Bauchflossen bei Teleostiern; **Hammarsten, 120.**

Struttura dei gangli simpatici in Selaci; **Pitzorno, 246.**

Appareils nerveux périphériques du rythme respiratoire; **Deganello, 57.**

Sense Organs.

Eyes of *Boleophthalmus* und *Periophthalmus*; **Baumeister, 12.**

Eye of *Orthogoriscus*; **Jaquet, 148.**

L'œil du *Protopterus annectens*; **Grynfeldt, 115.**

Ear of *Cynoscion regalis*; **Parker, 226.**

Alimentary System.

Darmsystem der Fische und Dipnoer; **Jacobshagen, 145.**

Muscolatura delle ossa faringee di *Carassius auratus*; **Arcangeli, 7.**

Pharyngeal teeth; **Shepherd, 320.**

Teleostean Thyroid Gland; **Guderhatsch, 116.**

Das adenoide Organ in der Speiseröhre der Selachier; **Kultschitzky, 179.**

Cloacal cavity of Selachians; **Savouré, 300.**

The Morphology of the Swim-bladder in Teleosts; **Tracy, 362.**

Glands and retia mirabilia of air-bladder; **Woodland, 384.**

Myology.

Muskeln und Nerven der Brustflosse und der Körperwand bei *Acanthias vulgaris*; **Müller, 207.**

Rumpfmuskulatur von *Petromyzon fluviatilis*; **Schiefferdecker, 303.**

Studien in der von den *Nn. trigeminus* und *facialis* innervierten Muskulatur der Knochenfische; **Holmqvist, 136.**

Electric Organs.

Über Bau und Funktion der elektrischen Organe; **Garten, 99.**

Sur le chondriome des lames électriques de la Torpille; **Fauré-Frémiet et Mironesco, 76.**

Osteology.

Strukturverhältnisse des Selachier-Knorpels; **Roth, 290.**

Ueber die Entstehung der Diplospondylie der Selachier; **Šecerov, 311.**

Verkrümmung der Wirbelsäule der Fische. (Ungarisch); **Keller, 162.**

Osteology of Berycomorphi, **271**; Iniomi, **272**; Cirrhitiformes, **275**; Salmonpercae, **276**; Microcyprini, **277**; Syntognathi, **278**; Ostariophysi, **279**, **280**; Gobioidae, **283**; **Regan.**

Osteology of Aulostomidae, Syngnathidae und Solenostomidae; **Jungersen, 158.**

Osteology of Scombridae; **Starks, 327.**

Osteology of *Liognathus*, *Prometichthys*, *Lepidopus*, *Trichiurus*, Carangidae; **Starks, 328.**

Anarrhichas skeleton; **Gill, 108.**

Cranio di *Lucioperca sandra*; **Pugliesi, 262.**

Vascular and Respiratory Systems.

Système circulatoire de la Lamproie (*Petromyzon fluviatilis*) (Polish); **Możeyko, 206.**

Ueber angebliche Schwanzsinus bei *Petromyzon*; **Favaro, 77.**

Vasi splancnici in *Scyllium catulus* e *Torpedo marmorata*; **Diamare, 60.**

Ueber die Sphincteren an den Gefässen der Rochen; **Mayer, 200.**

The pseudobranchial and carotid arteries in *Chlamydoselachus anguineus*; **4: Polyodon spathula; 3, Allis.**

Subcutaneous vessels in *Lepidosteus*; **Allen, 2.**

Distribuzione delle fibre nel ventricolo del cuore dei Teleostei; **Sala, 298.**

Struttura delle branchie; **Lo Giudice, 192.**

Gill-position in myxinoids; **Stockard, 344.**

Excretory and Reproductive Organs.

Reins du *Crystallogobius*; **Guitel, 118.**

The structure and function of the adult head kidney of *Bdellostoma stouti*; **Price, 257.**

Sistema interrenale e cromaffine in alcuni Teleostei; **101: In Murenoidi; 100, Giacomini.**

Interrenale anteriore e corpuscoli di Stannius: differenze; **Giacomini, 102.**

Capsule surrénale; **Pettit, 243.**

The primitive pores of *Polyodon spathula*; **Nachtrieb, 208.**

Other Organs.

Zur Kenntnis der Elasmobranchier-Thymus; **Hammar, 119.**

The reactions of the dogfish to chemical stimuli; **Sheldon, 315.**

Über die Wirkung einiger Narkotika auf Fische; **Reuss, 287.**

Über die Einwirkung von Veronal und Trional auf Fische; **Schmid, 304.**

Influence des agents physiques et action de divers poisons sur l'activité du cœur embryonnaire des poissons; **Polimanti, 250.**

Effects of changes in the density of water upon the blood of fishes; **Scott, 309.**

The effects of exposure on the gill filaments of fishes; **Osburn, 220.**

Resistenza di pesci alla diminuzione dell'ossigeno; **Orseniga, 219.**

Bedeutung des Wassers als spezifischer Atmungsreiz; **Rijnberk, 288.**

Relation between egg-contents and water; **Dakin, 54.**

Können die Eier von *Fundulus* und die jungen Fische in destilliertem Wasser leben?; **Loeb, 195.**

Contributo alla fisiologia del sistema nervoso centrale e del movimento dei pesci. I. Selacoidei (*Scyllium catulus* Cuvier e *S. canicula* L.); **Polimanti, 251.**

Influence of eyes, ears, &c., on movements of *Mustelus canis*; **Parker, 227.**

Olfactory reactions in fishes; **Parker, 229.**

Influenza di luci colorate su sviluppo di nova di trota; **Supino, 351.**

Clupea harengus, retardation of ova; **Williamson, 382.**

Physiology of gas production in Teleostean fishes; **Woodland, 383.**

Glands and retia mirabilia of air-bladder; **Woodland, 384.**

The integumentary nerves of fishes as photoreceptors; **Parker, 228.**

Beiträge zur Physiologie der Pigmentzellen in der Fischhaut; **Frisch, 97.**

Farbenwechsel der Pleuronectiden; **Rijnberk, 288.**

Licht und Farbenempfindungen; **Bauer, 11.**

Einfluss der Temperatur auf die schwarzen Pigmentzellen der Fischhaut; **Frisch, 95.**

Luminescence in Spinacidae, Sternoptychidae and Myctophidae; **Ōshima, 221.**

Drei Fälle von Verletzung durch den giftigen Fisch *Synanceia*; **Schnee, 306.**

Influenza della forma sulla locomozione dei pesci; **Polimanti, 253.**

DEVELOPMENT. 5415

General.

Contributi alla embriologia dei Teleostomi; **Lanzi, 183.**

Certains éléments de la lame de revêtement des embryons de quelques Téléostéens; **Lanzi, 182.**

Sparidae and *Scorpaenidae*, reproductive organs, eggs and larvae; **Williamson, 381.**

Die Entstehung des Dottersackkento- blast und die Furchung bei der Forelle; **Kopsch, 171.**

Premiers moments de développement, relativement à l'épaississement prostomal; **Lanzi, 180, 181.**

Über zwei riesige Embryonen von *Lamna*; **Lohberger, 197.**

Development of *Squalus acanthias*; **Scammon, 302.**

Larve e forme giovanili di Teleostei dello stretto di Messina; **Mazzarelli, 201.**

Salmo lacustris e *S. carpio*: larve, biologia; **Supino, 353.**

Sur quelques larves de Poissons apodes; **Roule, 292.**

Ovum and Oogenesis.

Thynnus: basi proteiche dello sperma e delle ovaie; **Dezani, 59.**

Origin of sex-cells of *Amia* and *Lepidosteus*; **Allen, 1.**

Segregation of germ-cells of *Lophius*; **Dodds, 63.**

Organogeny.

Die morphologische Entwicklung der Ktenoidschuppe; **Hase, 122.**

Entwicklung und Bedeutung des „Haft“ organs bei *Acipenser sturio* (Russ.); **Zavadskij, 388.**

Die Entwicklung des larvalen Haftapparates beim Sterlet (*Acipenser ruthenus*); **Sawadsky, 301.**

Sviluppo del tessuto nervoso in Selaci; **Sterzi, 341.**

Différentiation interne du myotome et formation des éléments sclérotomatiques; **Sunier, 350.**

Sviluppo dello scheletro assiale nei Murenoidi; **Sella, 312.**

Embryonalentwicklung des Knorpelschädels von *Ceratodus*; **Krawetz, 172.**

Die Entwicklung des Primordialcranium von *Lepidosteus osseus*; **Veit, 365.**

Acipenser ruthenus, Entwicklung und Natur der Rückenplättchen und Flossenstrahlen (Russ.); **Dikson, 162.**

Die Entwicklung des Brustflossenskelettes bei *Amia calva*; **Heronimus, 131.**

Untersuchungen über die paarige Afterflosse der Schleierschwänze; **Storch, 346.**

Die Entwicklung des Ductus endolymphaticus bei den Knochenfischen; **Wenig, 379.**

Die Entwicklung der Macula neglecta beim *Salmo*-embryo; **Okajima, 218.**

Entwicklungsgeschichte des Gefäßsystems bei den Knochenfischen (Polish); **Grochmalicki, 114.**

Sviluppo dell' interrenale e dei corpuscoli di Stannius nei Salmonidi; **Giacomini, 103.**

Über den Beginn der Atmung bei den Embryonen von *Scyllium*; **Polimanti, 252.**

Post-Embryological.

Wachstum des Sterlets, dasselbe beeinflussende Faktoren, Periodicität (Russ.); **Ostroumov, 222.**

A 74 mm. *Polyodon*; **Danforth, 55.**

Polyodon, small specimens; **Barbour, 10.**

Growth of Herrings; **Lea, 185.**

Su alcuni stadii postlarvali appartenenti a Gadidi rari del golfo di Napoli; **Lo Bianco, 191.**

Wachstum von *Lucioperca leucichthys* (Russ.); **Heide, 128.**

Postlarvale Entwicklungsstadien von *Lophius piscatorius* L.; **Stiasny, 343.**

Entstehung des jugendlichen Farbkleides der Forelle (*Salmo fario*); **Wagner, 369.**

Experimental and Regeneration.

Experimentelle Untersuchungen an Rochenembryonen (Russ.); **Eismond, 70.**

Einfluss plötzlicher Temperaturschwankungen auf die Entwicklung der Bachforelleneier und Brut; **Hein, 130.**

Wirkung ununterbrochenen Centrifugierens auf junge Fische (Russ); von **Stein, 332.**

Regeneration des Kiemendeckels und des Flossen der Teleostier; **Beig-lówna, 17.**

Mangelhafte Regeneration des Schwanzendes und der Schwimmblase bei *Cyprinus carpio*; **Tarnani, 357.**

Production of cyclopia in embryo; **Lewis, 189.**

Cyclopean fish; **Stockard, 345.**

·ETHOLOGY. 5419

General.

Marvels of fish life as revealed by the camera; **Ward, 376.**

Habitat of deep-sea fishes; **Hjort, 133.**

Biologie der Fische Russlands (Russ); **Berg, 18.**

Die Verbreitung der pelagischen Fischeier und Larven in der Beltsee; **Apstein, 6.**

Biology of fish eggs and larvae; **Dakin, 54.**

Biologisches von *Petromyzon planeri* Bloch; **Schreitmüller, 307.**

Mobula, Aetobatus, habits; **Coles, 52.**

Oncorhynchus, life history; **McMurrich, 199.**

Biology of Sprat in Norse waters; **Sund, 349.**

Biologie der aalartigen Fische; **Schmidt, 305.**

Biology of the Eel; **Sæmundsson, 297.**

Recherches sur la biologie de l'Anchois (*Engraulis encrassicholus*); **Fage, 73.**

Habits and life history of *Opsanus tau*; **Gudger, 117.**

Anarrhichas, habits; **Gill, 108.**

Clinus, coloration, habits, &c., of S. African spp.; **Gilchrist & Thompson, 105.**

Ecological notes on the fishes of Walnut lake, Michigan; **Hankinson, 121.**

Stream fishes and the method of physiographic analysis, Ecological succession; **Shelford, 317, 318, 319.**

Schlafstellungen der Fische; **Romels, 289; Werner, 380.**

Über den Schlaf von Fischen; **Eulefeld, 71a.**

Veränderungen im Zusammenhange mit der Fortpflanzungstätigkeit; **Merk, 203.**

Aenderungen in den Organen der Goldfische nach Verbleiden in Finsternis; **Ogneff, 217.**

Color changes; **Bean & Weed, 16; Sumner, 348.**

Farbensinn der Fische; **Frish, 96.**

Ueber die Farbe der Tarbutten nach Exstirpation der Augen; **Buytendijk, 40.**

Zur Phototaxis bei Fischen; **Franz, 90.**

Migration.

Ueber Ortsgedächtnis bei Fischen und seine Bedeutung für die Wanderungen; **Franz, 91.**

Die Wanderungen der Fische in der Ostsee; **Strodtmann, 347.**

Die Wanderung der Heringe; **Pettersson, 242.**

Migration of Salmon in Columbia R.; **Greene, 110, 111.**

Movements of Eel fry; **Hillas, 132.**

Migration of Eels in Victoria; **Kershaw, 167.**

Geophysikalische Verhältnisse auf den Fundstellen der Aallarven; **Krebs, 174.**

Pseudo-migrations du Thon commun (*Thynnus vulgaris*); **Bonnhiol, 21.**

Gedeihen, Wanderung und Ort der Entstehung der Scholle (*Pleuronectes platessa*); **Reibisch**, 285.

Food.

Ernährung der Fische; **Lipschütz**, 190.

Forelle und Ringelnatter; **Döderlein**, 64.

Breeding, Oviposition, Parental Care.

Geschlechtsreife und Laichen von *Lucioperca leucichthys* (Russ.); **Heide**, 129.

Breeding habits of *Semotilus atromaculatus*; **Reighard**, 286.

Poeciliidae, breeding; **Seal**, 310.

Geophagus, breeding habits; **Haseman**, 124.

Sur la ponte de *Cottus bubalis*; **Danois**, 56a.

VARIATION AND ÆTIOLOGY.

5423

Variation, Teratology, Hybrids.

Ambicolorate flat fish; **Elmhirst**, 71.

Mostruosità in Anguilla; **Ninni**, 214.

Mostri doppi dei Teleostei; **Lanzi**, 184.

Kranke und monströse Forellen (Norweg.); **Grieg**, 112.

Sargus rondeletii with malformed snout; **Jaquet**, 147.

Cyclopean Fish; **Stockard**, 345.

The experimental production of cyclopia in the fish embryo (*Fundulus heteroclitus*); **Lewis**, 189.

Heredity and Evolution.

Heredity in *Fundulus* hybrids; **Newman**, 209.

Evolution of fins; **Swinnerton**, 354.

Die Entstehung einer neuen Coregonenform in einem Zeitraum von 40 Jahren; **Thienemann**, 360.

DISTRIBUTION.

5427

(a) MARINE.

Europe and neighbouring seas.

N. Atlantic deep sea fishes, gen. and spp. n.; **Zugmayer**, 389, 390.

N. Atlantic deep sea fishes; **Hjort**, 133.

Iceland, new or rare fishes; **Sæmundsson**, 296.

Fische des Rigaer Meerbusens; **Schweder**, 308.

Norway, **Grieg**, 113.

Yarmouth, notes; **Patterson**, 230, 231, 232.

Luvarus imperialis on Irish Coast; **Constable**, 53.

Irish Atlantic Slope, Chimaeroids; **Holt and Byrne**, 138.

Irish Atlantic Slope, List of recorded species; **Holt and Byrne**, 139.

Irish Atlantic Slope. *Scopelus*; **Holt and Byrne**, 140.

Generi dei Pesci del Mare die Messina; **Facciola**, 72.

Fische von Rovigno; **Burckhardt**, 38.

Black Sea, *Sarda sarda*, 19; *Morone labrax*; 20, **Berg**.

Thynnus thynnus, Vorkommen im Schwarzen Meere (Russ.); **Tichij**, 361.

North America.

New Jersey, *Citharichthys* sp. n.; **Fowler**, 81, 87.

N. Carolina, *Microgobius* sp. n.; **Smith**, 322.

Florida, Blenniidae spp. n.; **Nichols**, 212.

Santo Domingo, Albulidae, sp. n.; **Fowler**, 85.

San Juan Islands, *Sebastodes* spp. n.; **Starks**, 326.

S. California, spp. n.; **Starks and Mann**, 329.

South America.

Falkland Is. *Lampanyctus* sp. n.; **Gilbert**, 104.

Africa.

Natal, shore fishes described, spp. n. ;
Gilchrist and Thompson, 107.

Asia.

Borneo, spp. n. ; **Seale, 310a.**

Philippines ; **Jordan and Richardson, 154.**

Philippines, Chaetodontidae spp. n. ;
Smith and Radcliffe, 323.

Philippines, Chilodipteridae spp. n. ;
Radcliffe, 263.

Formosa, *Neopercis* sp. n. ; **Pietschmann, 245.**

Japan, Sciaenidae, Lobotidae & Lutanidae ; **Jordan & Thompson, 156, 157.**

Japan and Riu Kiu Islands, gen. & spp. n. ; **Snyder, 324 ; Franz, 88a.**

Japan ; **Tanaka, 356.**

Vladivostok ; **Popta, 254.**

Australia, Polynesia, etc.

Tropical Pacific, spp. n. ; **Kendall & Goldsborough, 165.**

Aru and Kei Isl. spp. n. ; **M. Weber, 377.**

Queensland, spp. n. ; **Ogilby, 215, 216.**

Report on Fishes from N. S. Wales, Victoria, S. Australia and Tasmania. spp. n. ; **McCulloch, 198.**

Victoria ; **Kershaw, 166.**

Additions to fish fauna of N. Zealand spp. n. ; **Waite, 372, 373.**

New Zealand Fishes described and figured, spp. n. ; **Waite, 371.**

Subantarctic islands of N. Zealand ;
Waite, 374.

Antarctic.

Fishes of the British Expedition, 1907-9 *Artedidraco* sp. n. ; **Waite, 370.**

Fishes of the German Expedition, spp. n. ; **Pappenheim, 225a.**

Sur quelques particularités de la faune antarctique d'après la collection de Poissons recueillis par l'expédition du Pourquoi-Pas ; **Roule, 291.**

Subantarctic Islands of New Zealand ;
Waite, 374.

Falkland Is. *Lampanyctus* sp. n. ;
Gilbert, 104.

(b) FRESHWATER.**Palaeartic.**

British and Irish freshwater Fishes ;
Regan, 270.

Dace in Ireland ; **Holt, 137.**

Russie et pays Limitrophes *Marsipobranchii Selachii Chondrostei* (Russ.) ;
Berg, 18.

Transylvania, Petromyzonidae gen. n. ;
Regan, 273.

Syria, *Phoxinellus* sp. n. ; **Pellegrin, 236.**

Irkutsk, Siberia ; **Jordan & Thompson, 155.**

Amur, *Pseudobagrus* sp. n. ; **Popta, 254.**

Tibet, Cyprinidae sp. n. ; **Stewart, 342.**

Yunnan, spp. n. ; **Chaudhuri, 43.**

Yangtze R. spp. n. ; **Kreyenberg, 176.**

China, *Cobitidae* sp. n. ; **Kreyenberg, 177.**

Corea ; **Tanaka, 355.**

Japan ; **Tanaka, 356 ; Franz, 88a.**

Ethiopian.

La distribution des poissons d'eau douce en Afrique ; **Pellegrin, 240.**

Africa, Cyprinidae and Siluroids monographed ; **Boulenger, 23.**

Africa, *Barbus* n. spp. ; **Boulenger, 33.**

Africa, Poeciliidae, spp. n. ; **Boulenger, 32.**

Africa, *Mastacembelus* spp. n. ; **Boulenger, 35.**

W. Africa, *Barbus, Tilapia*, spp. n. ;
Pellegrin, 238.

Liberia, *Polypterus* sp. n. ; **Boulenger, 30.**

Lagos, *Haplochilus* sp. n. ; **Boulenger in Graham, 109.**

Ogowé, *Nannocharax* sp. n. ; **Pellegrin, 237.**

Ogowé, *Tilapia* sp. n. ; **Pellegrin, 235.**

French Guinea, *Barbus* sp. n. ; **Pellegrin**, 239.

Portugese Guinea, spp. n. ; **Boulenger**, 27, 28.

Cameroon and Guinea, spp. n. ; **Pappenheim**, 225.

S. Cameroon, spp. n. ; **Boulenger**, 34.

Brit. E. Africa, spp. n. ; **Lönnberg**, 195a.

Uganda, Cichlidae gen. and spp. n. *Barbus* sp. n. ; **Boulenger**, 25.

Tanganyika and Congo, spp. n. ; **Steindachner**, 335.

Lake Ngami Basin, Bechuanaland, spp. n. ; **Boulenger**, 24.

L. Rukwa, *Clarias* sp. n. ; **Boulenger**, 31.

Mashonaland, *Pelmatochromis* sp. n. ; **Boulenger**, 29.

Transvaal, *Labeo* sp. n. ; **Methuen**, 204.

S. Africa, Cyprinidae spp. n. ; **Gilchrist & Thompson**, 106.

Indian.

Philippines ; **Jordan & Richardson**, 154.

Borneo, spp. n. ; **Seale**, 310a.

Lombok, Cyprinidae, *Gobius* spp. n. ; **Popta**, 255 : Poeciliidae ; **Regan**, 281.

Nearctic.

N. America, *Lepidosteus* spp. n. ; **Fowler**, 86.

Great Lakes, Salmonoids ; **Jordan & Evermann**, 153.

Wisconsin, *Leucichthys* sp. n. ; **Wagner**, 368.

Michigan, *Argyrosomus* sp. n. ; **Wagner**, 366.

The fishes of Delaware ; **Fowler**, 82.

District of Columbia ; **Bean & Weed**, 15.

N. Carolina, *Moxostoma* sp. n. ; **Nichols**, 213.

Synoptic list of fishes of Chicago ; **Meek & Hildebrand**, 202.

Colorado, *Notropis* sp. n. ; **Cockerell**, 47.

Neotropical.

Guatemala, *Xiphophorus* sp. n. ; **Regan**, 281.

S. America, Loricariidae & Callichthyidae, spp. n. ; **Steindachner**, 336, 337 : S. America, Ostariophysi, Cichlidae, spp. n. ; **Steindachner**, 338, 339, 340.

S. America, *Ageniosus & Farlowella* spp. n. ; **Steindachner**, 334.

S. America, Cichlidae spp. n. ; **Haseman**, 125.

Colombia, Venezuela, Characidae spp. n. ; **Eigenmann**, 69.

Colombia, Characiformes, spp. n. ; **Boulenger**, 26.

Venezuela, spp. n. ; **Fowler**, 80.

Brazil, Siluroids, spp. n. ; **von Ihering**, 144.

Central S. America, spp. n. ; **Haseman**, 124.

Amazon, *Petalosoma* sp. n. ; **Regan**, 282.

Rio Iguassu, spp. n. ; **Hasemann**, 126.

Sta. Catharina, R. Itapocú ; **Steindachner**, 333.

Bolivia, *Pygidium* sp. n. ; **Eigenmann**, 68.

Australian.

Celebes and Lombok, Poeciliidae ; **Regan**, 281 : Cyprinidae, *Gobius* spp. n. ; **Popta**, 255.

Aru and Kei Islands, spp. n. ; **Weber**, 377.

Verbreitung des australischen Lungenfisches ; **König**, 170.

New Zealand, *Geotria* sp. n. ; **Regan**, 273.

(c) FOSSIL.

Silurian.

Upper Silurian of Portugal ; **Priem**, 260.

Devonian.

New York, *Machoeracanthus* sp. ; **Smith**, 321.

Old Red von Livland Gour. Pskov und Novgorod *Psammosteidae* spp. nn. (Russ.); **Preobrazenskij, 256.**

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Upper Devonian of Ohio *Arthrodira*; **Hussakof, 142.**

Carboniferous.

British Carboniferous *Palaeoniscidae*; **Traquair, 363.**

Permian.

Permian of N. America; **Hussakof, 143.**

Triassic.

Couches du Lualaba, Congo Belge, *Pholidophorus* n. sp.; **Leriche, 186.**

Solenhofen, *Selachii* n. spp.; **Eastman, 66.**

Jurassic.

Lias of Dumbleton, Glos. *Euthynotus* sp.; **Woodward, 386.**

Cretaceous.

Selachians of the British Cretaceous; **Woodward, 385.**

Upper Senonian of Tunis, *Coelodus* n. sp.; **Priem, 259.**

Sénouien du Hainaut, *Acrotemnus splendens*; **Leriche, 187.**

Cretaceous of New Jersey, spp. n.; **Fowler, 84.**

Wealdien de Bernissart spp. n.; **Traquair, 364.**

Ptychodus teeth of English Chalk; **Dibley, 61.**

Eocene.

Paris basin, *Amia* spp. n. otoliths; **Priem, 261.**

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Eocene of New Jersey; **Fowler, 84.**

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 pl. iii fig. 4.

Astronesthes decimus **sp. n.** 44° N.
 11° W., ZUGMAYER t.c. p. 80 pl. iii
 fig. 6.

Eustomias braueri **sp. n.** 36° N. 8° W.,
 ZUGMAYER t.c. p. 72 pl. iii fig. 3.

Gonostoma polyphos **sp. n.** 36° N.
 10° W., ZUGMAYER t.c. p. 47 pl. ii fig. 2.

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(N-9186 b)

BAGRIDAE.

Auchenoglanis njamensis p. 371 f. 287, *altipinnis* p. 372 f. 288, spp. n., Africa, BOULENGER Cat. Afr. Fish. 2.—*A. ngamensis* also in Trans. Zool. Soc. 18 p. 405 fig.—*A. iturii* sp. n. R. Ituri, Congo, STEINDACHNER Anz. Akad. Wien 1911 p. 530, and Sitzungsab. Akad. Wien 120 p. 1185.

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Phractura brevicauda p. 502 f. 374, *intermedia* p. 503 f. 375, spp. n., S. Cameroon, BOULENGER t.c.

SCHILBEIDAE.

Eutropius banguelensis p. 282 f. 231, L. Bangweu, sp. n., BOULENGER Cat. Afr. Fish. 2.

CLARIIDAE.

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PIMELODIDAE.

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Typhlobagrur kronei is a blind form of *Pimelodella lateristriga*, HASEMAN t.c. p. 323.

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Imparfinis mirini p. 318 pl. xlvii R. Piracicaba, *hollandi* p. 383 pl. xlviii fig. 2 R. Iguassu, **spp. n.**, HASEMAN t.c.

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TRICHOMYCTERIDAE.

Pygidium davisi **sp. n.** R. Iguassu, HASEMAN Ann. Carnegie Mus. 7 p. 380 pl. lxxxvii.—*P. barbouri* **sp. n.** Bolivia, EIGENMANN Ann. Carnegie Mus. 7 p. 214 pl. xxxii.

BUNOCEPHALIDAE.

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Dysichthys = *Bunocephalus*, HASEMAN t.c. p. 321.

CALLICHTHYIDAE.

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MURAENIDAE.

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OPHICHTHYIDAE.

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LYOMERI.

SACCOPHARYNGIDAE.

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thys* and *Nothobranchius*, notes, REGAN
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lujae, p. 263, *cabindae* p. 264, *exiguus*,
calliurus, p. 265, *striatus*, *longiven-
tralis*, p. 266, *grahami* p. 267, *macro-
stigma* p. 268, spp. n. Africa, BOULENGER
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javanicus* var. *trilineata* var. n. Lom-
bok, POPTA Notes Leiden Mus. 34 1911
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walkeri p. 262, spp. n. Africa, BOULEN-
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HEMIRHAMPHIDAE.

Hemirhamphus elongatus sp. n. Japan,
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fig. 21 = *Euleptorhamphus longiro-
stris* Cuv., TANAKA t.c. p. 71.

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family, REGAN Ann. Mag. Nat. Hist.
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EXOCOETIDAE.

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42° W., ZUGMAYER Res. Camp. Sci.
Monaco 35 p. 60 pl. ii fig. 6.—*E. lineatus
japonicus* subsp. n. Japan, FRANZ Abh.
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ANACANTHINI.

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35 p. 120 pl. vi fig. 1.

MACRURIDAE.

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BERYOIDAE.

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ZEOMORPHI.

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PERCOIDEA.

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Callanthias japonicus n. sp. Japan, FRANZ t.c. p. 40 pl. vi f. 49.

KUHLIIDAE.

Kuhlia proxima sp. n. Fiji, KENDALL and GOLDSBOROUGH Mem. Mus. Comp. Zool. **26** p. 282 pl. iii f. 2.

CHILODIPTERIDAE.

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OPISTHOGNATHIDAE.

Owstonia totoniensis figured, TANAKA Fish. Japan pl. viii.

CENTROPOMIDAE.

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FIERASFERIDAE.

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pl. xli.

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Bd. iv Abh. 1 p. 69 pl. viii f. 57.

XENOPTERYGII.

GOBIESOCIDAE.

Aspasma misakia figured, TANAKA
Fish. Japan pl. xv.

PEDICULATI.

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CERATHIDAE.

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TANAKA Fish. Japan pl. viii.

OPISTHOMI.

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sp. n., Old Red von Livland (Russ.),
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fig. 4.

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XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. L. BOULENGER

CONTENTS

	PAGE
I. TITLES	2
II. SUBJECT INDEX :—	
Comprehensive and Miscellaneous=5603.. ..	18
Structure=5607	18
Physiology=5611	20
Development=5615	21
Ethology=5619	23
Variation, Heredity, Evolution=5623	24
Faunae=5627	24
Actual	24
Fossil	26
III. SYSTEMATIC=5631 :—	
General	26
Reptilia	27
Lacertilia	27
Ophidia	29
Pterosauria	30
Plesiosauria	30
Crocodilia	30
Dinosauria	30
Chelonia	31
Theromorpha	31
Rhynchocephalia	32
Batrachia	32
Ecaudata	32
Caudata	33
Apoda	34
Stegocephala	34

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II.—SUBJECT INDEX.

COMPREHENSIVE AND MISCELLANEOUS. 5603

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Reptilien und Amphibien in Sage, Sitte und Literatur; Knortz, 168.

Amphibien und Reptilien, II (Anpassung der Organe an die Lebensweise); Werner, 361.

Erster Nachtrag zum Katalog der Reptilien- und Amphibien-Sammlung des Naturhistorischen Museums der Stadt Wiesbaden; Lampe, 185.

Notes on methods for the study of amphibian eggs and larvae; Kuntz, 181.

Notice sur les titres et travaux scientifiques de J. Pellegrin; Pellegrin, 266.

STRUCTURE. 5607

General.

Beiträge zur Anatomie einiger seltener Reptilien, mit besonderer Berücksichtigung der Atmungsorgane; Werner, 363.

Anatomy of *Megalophrys fœæ* and *Breviceps gibbosus*; Beddard, 25.

Anatomische Studien an der japanischen dreikralligen Lippenschildkröte (*Trionyx japonicus*); Ogushi, 255.

Beobachtungen und Versuche über den normalen und inversen Situs viscerum et cordis bei Anurenlarven; Pressler, 277.

Segmentation of the occipital region of the head in the Batrachia Urodela; Goodrich, 120.

Morphogenesis of the head of *Crocodylus porosus*; Meek, 217.

Die Haftballen des javanischen Flügelfrosches (*Polypedates reinwardtii*); Siedlecki, 306.

Histology and Cytology.

Contribution à l'étude des cellules intercalaires du revêtement endothélial du mésentère de la grenouille; Carrasco, 56.

Das Bindegewebe im Schwanz von Anurenlarven; Triepel, 337.

Sur le tissu conjonctif dans le myocarde des grenouilles. Rôle du tissu élastique dans le myocarde; Athanasiu et Dragoiu, 12.

Das Mesenchym und das Mesostroma der Froschlarven und deren Produkte; Studnička, 330.

Chromosomenlängen bei *Salamandra*, nebst Bemerkungen zur Individualitätstheorie der Chromosomen; Meves, 226.

Le duplicisme constant du chromosome somatique chez *Salamandra maculosa*; Dehorne, 85.

Nervous System and Sense Organs.

Die Entwicklung des Zentralnervensystems der Chelonier und Crocodilier. Die Morphogenese des Gehirnes an Medianschnitten untersucht; Neumayer, 239.

The nervous system of the American leopard frog, *Rana pipiens*, compared with the European forms, *Rana esculenta* and *Rana temporaria*; Donaldson, 90.

Das Vorderhirn der Reptilien; Lange, 187.

Das Vorderhirn des Alligators; Unger, 338.

Die markhaltigen Faserzüge im Vorderhirn von *Necturus maculatus*; Röthig, 284.

Zellanordnungen und Faserzüge im Vorderhirn von *Siren lacertina*; Röthig, 283.

Ein Faserzug am Boden des Recessus praeopticus (Tractus praeopticus) bei den Amphibien; Röthig, 285.

Eine Commissura intertrigemina im Amphibiengehirn; **Bindewald, 29.**

Das Ciliarganglion der Reptilien; **Lenhossék, 195.**

Morphologie der Triginus-Gruppe bei den Reptilien; **Belogolowy, 26.**

The peripheral distribution of the cranial nerves of *Necturus maculatus*; **Norris and Buckley, 250.**

The rank of *Necturus* among the tailed amphibians as indicated by the distribution of its cranial nerves; **Norris, 249.**

The fifth and seventh cranial nerves in *Plethodon glutinosus*; **Norris, 248.**

Ueber den N. trochlearis der Urodelen und über die Austrittsstellen der Gehirnnerven aus dem Schädelraum im allgemeinen; **Gaupp, 115.**

The nervus terminalis (nerve of Pinus) in the frog; **Herrick, 134.**

Études des cellules des ganglions spinaux de grenouille à l'aide du paraboloïde de Zeiss; **Marinesco et Minea, 206.**

Sur les terminaisons nerveuses dans la peau du *Triton cristatus*; **Hulanicka, 149.**

Terminazioni a grappolo nei muscoli di *Lacerta*; **Martinotti, 207.**

Innervazione del cuore nei Rettili e Batraci; **Fedele, 100.**

On the histology of the eye of *Typhlotriton spelaus*; **Alt, 6.**

Beiträge zur Kenntnis der knorpeligen oder knöchernen halbzirkelförmigen Kanäle bei Urodelen; **Okajima, 258.**

Ueber das Vorkommen von zwei Foramina perilymphatica beim Urodelenohr; **Okajima, 257.**

The columella auris in Amphibia; **Kingsbury and Reed, 166.**

Die Nasenhöhle der Perennibranchiaten. (Ein Beitrag zur Phylogenese des Jacobsonschen Organs); **Anton, 11.**

Integument.

Beobachtungen an der Haut von *Gecolepis* und einigen anderen Geckoniden; **Schmidt, 298.**

Structure et signification des poils de *Trichobatrachus robustus*; **Phisalix, 271.**

(N-9186 d)

Répartition et signification des glandes cutanées chez les Batraciens; **Phisalix, 272.**

Ghiandole cutanee di *Triton cristatus*; **Furlotti, 113.**

Zur Kenntnis einiger Fadenstrukturen in den Epidermiszellen von Froschlärven; **Loewenthal, 202.**

Das Rückenschild der *Ceratophrys dorsata*; **Boldt, 30.**

Diversity in the scutes of *Chelonia*; **Coker, 68.**

Myology.

Untersuchung einer Anzahl von Muskeln von *Rana esculenta* in bezug auf ihren Bau und ihre Kernverhältnisse; **Schiefferdecker, 296.**

Die ventrale Rumpfmuskulatur von *Menobranchius*, *Menopoma* und *Amphiuma*, verglichen mit den gleichen Muskeln anderer Urodelen; **Maurer, 216.**

Muscolatura della lingua dei Geconidi; **Zavattari, 381.**

Osteology.

Über das Skelett von *Voeltzkowia mira* Bttgr. Ein Beitrag zur Osteologie der Eidechsen; **Rabanus, 278.**

Osteology of British Mesozoic Crocodiles; **Watson, 356.**

Osteology of *Microlepidus*; **Watson, 355**: of *Pteranodon*; **Eaton, 95**: of *Placochelys*; **Jaekel, 153**: of *Seymouria baylorensis*; **Williston, 369.**

Entwicklungsgeschichte und vergleichende Morphologie des Schildkrötenhäutels; **Kunkel, 180.**

Skull of *Chelone midas*; **Kesteven, 162**: of *Lacerta jacksoni*; **Degen, 80**: of *Cynodont reptiles*; **Broom, 46**: **Watson, 353**: of *Parietichus*; **Branson, 45**: of *Labidosaurus*; **Williston, 367**: of the *Ceratopsida*; **Huene, 145.**

Skull and mandible of *Peloneustes* and other Plesiosaurs; **Andrews, 10.**

Ueber die Beziehungen zwischen den Theromorphen Cope's, bzw. den Therapsiden Broom's und den Säugetieren, erörtert auf Grund der Schädelverhältnisse (nebst einem weiteren Beitrag zur Frage der Homologie des Kiefergelenkes und der morphologischen Bedeutung des Squamosums); **Fuchs, 112.**

Berichtigung zu Fuch's Aufsatz : Bemerkungen über Monimostylie und Streptostylie“ etc. ; **Versluys, 341.**

Bemerkungen über das Munddach der Amnioten, insbesondere der Schildkröten und Schlangen ; **Fuchs, 111.**

Sur le déterminisme de la métamorphose chez les Batraciens : XVII. Les changements des rapports, le fonctionnement et la constitution de l'arc vomérotptérygo-palatin chez les larves de *Salamandridæ* ; **Wintrebert, 374.**

Ueber die Wirbelsäule und die Hüllen des Rückenmarks von *Cryptobranchus japonicus* ; **Shimada, 304.**

Pectoral girdle of *Plesiosaurus* ; **Watson, 354.**

Der Aufbau der Skeletteile in den freien Gliedmassen der Wirbeltiere. Untersuchungen an urodelen Amphibien ; **Eggeling, 96.**

Die enchondrale Ossifikation bei den Amphibien (*Salamandra maculosa* Laur.) ; **Klintz, 167.**

Alimentary System, Etc.

Sur les papilles cornées œsophagiennes des Tortues de mer et en particulier de *Thalassochelys caretta* ; **Semichon, 302.**

Totaler, langbestandener Darmverschluss bei einer gesunden *Rana esculenta* ; **Fischer, 102.**

Dentition of *Omphalosaurus* ; **Merriam and Bryant, 224.**

Circulatory and Respiratory Organs.

Sur le cœur de deux Urodèles apneumones appartenant au genre *Euproctus* ; **Dehaut, 82.**

Two cases of abnormal hearts and one of an abnormal anterior abdominal vein in the frog ; **O'Donoghue, 252.**

Structure of truncus arteriosus of some Australian frogs ; **Oliver, 260.**

Rami gastrointestinali dell' aorta in *Anguis fragilis* e *Gongylus ocellatus* ; **Mannu, 204.**

Ueber die Entwicklung der Darmarterien und des Vornierenglomerulus bei *Bombinator*. Ein Beitrag zur Kenntnis des visceralen Blutgefäßsystems und seiner Genese bei den Wirbeltieren ; **Mollendorff, 229.**

Ueber die Nierenpfortader des *Trionyx japonicus* ; **Ogushi, 254.**

Untersuchungen über die Regeneration der Blut- und Lymphgefäße im Schwanz von Froschlärven ; **Dziurzyński, 94.**

Gesammelte Studien an den roten Blutkörperchen der Amphibien ; **Meves, 225.**

Die Spindelzellen des Amphibienblutes ; **Neumann, 238.**

Über die Technik bei der Untersuchung der Kapillarzirkulation beim Frosch, besonders in der Froschlunge ; **Öhrwall, 253.**

Urinogenital System.

Ueber die Entwicklung des Vornierenglomerulus bei *Bombinator* ; **Mollendorff, 229.**

Ueber die Nebennieren- und Nierenpfortader des *Trionyx japonicus* ; **Ogushi, 254.**

Sur l'aspect général des capsules surrénales de *Rana temporaria* ; **Cumia, 73.**

Some anomalies in the genital organs of *Bufo lentiginosus* and their probable significance ; **King, 165.**

Ein Fall von Hermaphroditismus lateralis verus bei *Rana esculenta* ; **Kuschakewitsch, 183.**

Die Peritonealkanäle der Schildkröten und Krokodile ; **Iseebree Moens, 151.**

Special Glands.

Sur le corps thyroïde médian de quelques sauriens d'Algérie (*Lacerta ocellata* var. *pater* Lat., *Psammodromus algirus* Fitz et *Gongylus ocellatus* Gm.) ; **Viguier, 342.**

Note sur les glandules parathyroïdiennes et parathymiques de la Tortue grecque ; **Aimé, 2.**

Les corps adipo-lymphoïdes de quelques Batraciens ; **Kermel, 160.**

PHYSIOLOGY. 5611

The reactions of amphibians to light ; **Pearse, 264.**

On the regular seasonal changes in the relative weight of the central nervous system of the leopard frog; **Donaldson, 90.**

Fonction du ganglion du vague chez *Thalassochelys caretta*; **Spallitta, 314.**

Un riflesso tonico diffuso del *Bombinator pachypus*; **Mochi, 228.**

Action inhibitrice du cercelet sur le centre de la copulation chez la Grenouille. Indépendance fonctionnelle de ce centre vis-à-vis du testicule; **Busquet, 55**

Existence chez la Grenouille mâle d'un centre médullaire permanent présidant à la copulation; **Busquet, 54.**

Noch einmal die Akkommodation der Schildkröte; **Pfugk, 269.**

A note on the chemistry of the muscle and liver of reptiles; **Lyman, 203.**

Effects of starvation upon *Necturus maculatus*; **Smallwood and Rogers, 307.**

Cours du jeûne chez *Gongylus ocellatus* en diverses conditions du milieu; **Ferralis, 101.**

Der experimentelle Beweis für die Unschädlichkeit des Dickdarmverchlusses beim Frosch; **Fischer, 103.**

Sur la respiration d'un Batracien urodèle sans poumons (*Euproctus montanus*); **Lapicque et Petetin, 190.**

Wahre Dyspnoe beim Frosche; **Babák, 15.**

Ueber das Verhalten verschiedener Wassertiere zum Sauerstoffgehalt des Wassers nebst Beobachtungen über die Bedeutung der Hautatmung bei Amphibien; **Hasegawa, 130.**

Sur la fonction de réserve adipeuse des corps adipolymphoïdes; **Kennel, 159.**

Action of the venom of *Echis carinatus*; **Fraser and Gunn, 108.**

Crapaud, venin et son action physiologique; **Pierotti, 273.**

Les venins de Batraciens et les Batraciens venimeux; **Dehaut, 81.**

Studies on sex-determination in amphibians. iv. The effects of external factors, acting before or during the time of fertilization, on the sex ratio of *Bufo lentiginosus*; **King, 164.**

Temperature as a factor in the determination of sex in amphibians; **King, 163.**

Das Verhalten des osmotischen Druckes bei *Rana temporaria* während der Embryonalentwicklung. (Schwedisch); **Bachman and Runnström, 16.**

Ovarialtransplantation auf fremde Species bei Tritonen; **Harms, 128.**

Ueber die Wirkung von Hoden- und Ovarialsubstanz auf die sekundären Geschlechtsmerkmale des Frosches; **Meisenheimer, 221.**

Über die Rückbildung der Eier gefütterter, aber unbegatteter Weibchen von *Rana esculenta*; **Burkardt, 52.**

Ueber die Wirkung der Radiumemancipation auf Eier niederer Tiere; **Bauer, 24.**

Künstlich bewirkte Frühgeburt bei *Lacerta vivipara*; **Wiedemann, 365.**

DEVELOPMENT. 5615

General.

Anfibi urodeli e anuri: ontogenesi; **Ruffini, 288.**

The early development of *Spelerpes bilineatus*; **Goodale, 118.**

Some remarks on the gastrulation of *Desmognathus fusca*; **Hilton, 141.**

Die Keimblattbildung des *Hynobius nebulosus*; **Kunitomo, 179.**

On blastopore closure in Amphibia; **Goodale, 119.**

Citologia dell'ectoderma gastrulare in Anfibi urodeli; **Ruffini, 289.**

Fine struttura e potere secretorio delle cellule ectodermiche embr. di Anfibi urodeli; **Ruffini, 290.**

The development of the swimming movement in amphibian embryos; **Coghill, 67.**

The nests and larvae of *Necturus*; **Smith, 309.**

Notes on methods for the study of amphibian eggs and larvae; **Kuntz, 181.**

Oeufs de *Bufo vulgaris*, élévation thermique et héliotropisme durant le développement; **Ruffini, 287.**

Oogenesis, Spermatogenesis, Fertilization, &c.

The origin of the sex-cells in *Chrysemys*; **Allen, 5.**

L'origine et l'évolution des gonocytes chez les Reptiles (*Chrysemys marginata*); **Dustin, 93.**

Elevazione termica e eliotropismo nello sviluppo di uova di *Bufo*; **Ruffini, 291.**

The structure of the spermatophores of *Amblystoma punctatum*; **Smith, 308.**

Spermatogenesi in *Geotriton fuscus*; **Terni, 332.**

Untersuchungen über den Einfluss ultravioletter Strahlen auf Sperma und Eier von Amphibien; **Levy, 198.**

Variations in susceptibility of amphibian ova to the X-rays at different stages of development; **Bardeen, 18.**

Radiumbestrahlung unbefruchteter Froscheier und ihre Entwicklung nach Befruchtung mit normalen Samen; **Hertwig, 134a.**

La polyspermie expérimentale comme moyen d'analyse de la fécondation; **Brachet, 43.**

Rocherches sur l'influence de la polyspermie expérimentale dans le développement de l'œuf de *Rana fusca*; **Brachet, 44.**

Les deux facteurs de la parthénogenèse traumatique chez les Amphibiens; **Bataillon, 19.**

La parthénogenèse expérimentale chez *Bufo vulgaris*; **Bataillon, 20.**

Le problème de la fécondation circonscrit par l'imprégnation sans amphimixie et la parthénogenèse traumatique; **Bataillon, 22.**

L'embryogénie provoquée chez l'œuf vierge d'Amphibiens par inoculation de sang ou de sperme de Mammifère. Parthénogenèse traumatique et imprégnation sans amphimixie; **Bataillon, 21.**

Sur le nombre des chromosomes dans les larves parthénogénétiques de la Grenouille; **Dehorne, 84.**

Organogeny.

Early stages in the development of the central nervous system of *Amblystoma punctatum*; **Griggs, 126.**

Sviluppo di sist. nervoso centr. in *Lacerta*; **Grieb, 123.**

Die Entwicklung des Zentralnervensystems der Chelonier und Crocodilier. Die Morphogenese des Gehirnes an Medianschnitten untersucht; **Neumayer, 239.**

Development of the brain of the American alligator: The paraphysis and hypophysis; **Reese, 280.**

Die Entwicklung des Gehörorgans von *Hymobius*; **Okajima, 259.**

Ueber Entwicklung der Columnella auris bei *Testudo graeca*; **Bender, 27.**

Entwicklungsgeschichtliche Untersuchungen über das Zungenbein und die Ohrknöchelchen der Anuren; **Kothe, 176.**

Zur Entwicklungsgeschichte des Schildkrötenschädels; **Kunkel, 180.**

La valeur phylogénétique de l'arc ptérygopalatin chez les larves d'Urodèles; **Wintrebert, 373.**

Les changements des rapports, le fonctionnement et la constitution de l'arc voméoptérygo-palatin chez les larves de *Salamandridae*; **Wintrebert, 374.**

Sviluppo dell'arco mandibolare in *Tropidonotus natrix*; **Vitali, 343.**

Zur Genese des Chordaepithels (insbesondere bei Amphibien); **Georgi, 116.**

The limit between ectoderm and endoderm in the mouth and the origin of taste buds. 1. Amphibians; **Johnston, 156.**

Development of the digestive canal of the American alligator; **Reese, 280.**

Primi studi di sviluppo del polmone in *Gongylus ocellatus*; **Mannu, 205.**

Ueber die Entwicklung der Darmarterien und des Vornierenglomerulus bei *Bombinator*; **Möllendorff, 229.**

The origin and development of the anterior lymph hearts and the subcutaneous lymph sacs in the frog; **Knower, 169.**

Observations on living growing lymphatics in the tail of the frog larva; **Clark, 65.**

Sur le développement des leucocytes granuleux chez les Sauropsidés; **Kollmann, 173.**

Metamorphosis and Postembryonic.

Einige Worte über die riesigen Kaulquappen des *Pelobates fuscus* Laur; Nussbaum, 251.

Sur le déterminisme de la métamorphose chez les Batraciens: Le recul impossible du bassin chez *Branchiosaurus amblystomus* Credner; Wintrebert, 375.

La régression de la queue en dehors du système nerveux latéral chez *Alytes obstetricans*; Wintrebert, 376.

Neotenie bei *Molge vulgaris*; Entz, 97.

Formes axolotls de tritons palmés; reproduction d'individus sous cet état; Mourgue, 235.

Experimental and Regeneration.

On the effect of certain isotonic solutions on the development of the Frog; Jenkinson, 155.

Experimental observations on the development of the amphibian ear vesicle; Streeter, 329.

Beobachtungen und Versuche über den normalen und inversen Situs viscerum et cordis bei Anurenlarven; Pressler, 277.

Sur l'absence de réaction motrice à la suite d'excitations artificielles du système nerveux latéral chez les têtards d'Anoures; Wintrebert, 377.

Über künstlich erzeugte Jannsbildungen von *Triton taeniatus*; Hey, 140.

Recherches sur la régénération de la tête chez les larves d'Amphibiens; Weber, 357.

Struttura e rigenerazione della coda in *Lacerta*; Misuri, 227.

Welche Bedeutung hat das Nervensystem für die Regeneration der Tritonextremitäten?; Walter, 352.

Experimentelle Studien über Regenerationsvorgänge des Gliedmassenskelets der Amphibien; Fritsch, 109.

Regeneration transplantierter und vollständig entfernter Gliedmassen entwickelter Wirbeltiere; Kurz, 182.

Untersuchungen über die Regeneration der Blut- und Lymphgefäße im Schwanz von Froschlarven; Dziurzyński, 94.

Über Regeneration und Transplantation des Pankreas von Amphibien; Fischer, 104.

The fate of ovarian tissues when planted on different organs; Stockard, 323.

Ovarialtransplantation auf fremde Species bei Tritonen; Harms, 128.

ETHOLOGY. 5619

The biology of the red-backed salamander (*Plethodon cinereus erythronotus*); Cochran, 66.

Notes on the natural history of *Amblystoma jeffersonianum*, *A. punctatum* and *A. tigrinum*; Smith, 310.

Salamandra caucasica, Lebensweise und Fortpflanzung; Cyrén, 76.

The discriminative ability of the painted turtle [*Chrysemys marginata*]; Casteel, 63.

Zur Biologie des Feuersalamanders, *Salamandra maculosa*; Melsheimer, 222.

Habit formation in frogs; Schaeffer, 294.

A case of defensive self-mutilation in *Cryptobranchius*; Smith, 311.

Zur Fresslust der *Vipera ammodytes*; Veith, 339.

Die Kröte ein Feind der Nachtfalter; Wodarz, 378.

Young snakes taking refuge in the mother's mouth in time of danger. Some additional facts; Dury, 91.

Some features of behavior in the courtship of the Palmate Newt (*Molge palmata*); Cummings, 74.

Ueber einen lebendgebärenden Froschlurch Deutsch-Ostafrikas (*Nectophryne tornieri* Roux); Krefft, 178.

Warning coloration in a Chameleon; Crossland, 70a.

Spitting snakes from S. Rhodesia; Curtis, 75.

On the Sudan spitting snake; Fraser, 107.

Effets de la morsure d'un lézard venimeux d'Arizona, l'*Heloderma suspectum*; Phisalix, 270.

Vipera aspis: casi di morsicatura; Police, 275.

Ancistrodon himalayanus, poison;
Boyd, 42.

Parasites. Trematodes; **Nicoll, 240**:
Nematode; **Seurat, 303**: *Trichomonas*;
Alexeieff, 3: Trypanosomes; **Franca,**
105: **Mathis et Léger, 213**: Haemogre-
garines; **Thiroux, 333**: **Schein, 295**:
Mathis et Léger, 215: **Laveran et**
Pettit, 193.

VARIATION, HEREDITY, EVOLUTION. 5623

Variations of *Salamandra maculosa*;
Boulenger, 34.

Ueber Färbungsveränderungen bei
Salamandra maculosa Laur. unter dem
Einfluss dunkler Bodenfarbe und
Feuchtigkeit; **Wiedemann, 364.**

Variation de l'écaillure chez *Uromas-
tiz acanthinurus*; **Olivier, 261.**

Variabilità della corazzatura cutanea
in *Lacerta muralis*; **Bignotti, 28.**

Sur la valeur du critérium physio-
logique pour la destruction des espèces
et des races: observations relatives aux
diverses formes de *Lacerta muralis*
qui vivent en Italie, en Sardaigne et en
Corse; **Dehaut, 83.**

Vererbung erzwungener Farb- und
Fortpflanzungsveränderungen bei Am-
phibien; **Kammerer, 157.**

Erklärung zur Notiz von T. H.
Morgan. „Is the female Frog heterozy-
gous in Regard to Sex-Determination?“;
Kuschakewitsch, 184.

Bastardierungen von *Triton*-Arten;
Schreitmüller u. Wolterstorff, 300.

L'origine des Urodèles; **Wintrebert,**
374.

Systematisch-phylogenetische Studien
an Viperiden; **Méhely, 220.**

Abstammung der Cheloniden; **Jaekel,**
153.

Isotely and Coralsnakes; **Gadow, 114.**

FAUNAE. 5627

A. ACTUAL.

Europe.

Eastern Småland and Öland, Batrachia
(Swedish); **Heintze, 132.**

Die holländischen Amphibien; **Oude-
mans, 262.**

Germany, *Coronella austriaca* var. n.
scalaris; **Sternfeld, 322.**

Schleswig-Holstein, Vorkommen der
Sumpfschildkröte (*Emys orbicularis*);
Averhoff, 13.

Ungarn, Tabelle zur Bestimmung der
Urodelen; **Bolkay, 31.**

Bosnia, Hercegovina and Southern Dal-
matia. Contributions to the herpetology;
Bolkay, 32.

Balkan, *Hylaia reissi* n. sp.; **Csiki,**
71.

Greece, *Lacerta peloponnesiaca*
figured; **Boulenger, 37.**

Cyprus, list of Reptiles and Batra-
chians; **Boulenger, 41.**

Asia and Malay Archipelago.

Transkaukasien, Amphibien und Rep-
tilien; **Nesterov, 237.**

Ost-Buchara, Amphibien und Reptilien,
spp. n.; **Nikoliskij, 246.**

Gouv. Jenisseisk, Amphibie et Rep-
tilia; **Čugunov, 72.**

Formosa, Amphibienfauna spp. n.;
Vogt, 344.

Eastern Himalayas, *Simotes* sp. n.;
Wall, 350.

Indian snakes, popular treatise; **Wall,**
348.

Ceylon, popular treatise on the snakes;
Abercromby, 1.

Seychelles and Aldabra, list of Batra-
chians and Reptiles, 3 spp. n.; **Boulen-
ger, 36.**

Seychelles, notes on the land tortoises;
Davidson, 77a.

Philippine Islands, poisonous snakes;
Griffin, 124.

Philippine Islands, list of snakes from
Polillo; **Griffin, 125.**

Sumatra, Reptilia spp. n.; **Werner,**
362a.

Sunda-Expedition des Frankfurter
Vereins für Geographie und Statistik.
Reptilien und Amphibien; **Roux, 286.**

Africa.

Algerian Sahara, *Rana mascareniensis*;
Pellegrin, 265.

Abyssinia, *Hyla* sp. n. ; **Nieden, 244.**

British East Africa, Batrachians and Reptiles, *Agama* sp. n. ; **Meek, 218.**

British East Africa, Reptiles (1 sp. n.) and Batrachians (1 sp. n.) ; **Lönnberg and Andersson, 201.**

Neue ostafrikanische Frösche aus dem Kgl. Zool. Museum in Berlin ; **Nieden, 242.**

Kurze biologische Notizen über einige Säuger und Reptilien Ostafrikas ; **Grote, 127.**

Deutsch-Ostafrika, Reptila u. Amphibia ; **Sternfeld, 316.**

Deutsch-Ostafrika, Reptilienfauna, spp. n. ; **Sternfeld, 321.**

Deutschostafrika, Verzeichnis der bei Amani vorkommenden Reptilien und Amphibien ; **Nieden, 243.**

Ost-Afrika, *Chirindia* sp. n. ; **Werner, 362a.**

Benadir, Ophidia ; **Lepri, 196.**

Südostafrika, Herpetologie, *Pachydactylus* sp. n. ; **Sternfeld, 319.**

L. Tanganyika district, Chamaeleontidae 3 spp. n. ; **Steindachner, 315.**

Barotseland, Rettili dell'Alto Zambese ; **Peracca, 268.**

South Africa and Madagascar, comparative review of the amphibian faunas ; **Hewitt, 135.**

South Africa, records of Lacertilia and Amphibia ; **Hewitt, 136.**

South Africa, snake fauna, its relationship to that of Madagascar ; **Hewitt, 138.**

S.W. Afrika, *Scelotes* sp. n. ; **Sternfeld, 320.**

Deutsch - Südwestafrika, Reptilien (ausser den Schlangen) und Amphibien ; **Sternfeld, 316.**

Südwestafrika, Herpetologie, 2 spp. n. ; **Sternfeld, 318.**

Kongostaat, zwei neue Schlangen aus dem Katangadistrikt ; **Müller, 236.**

South Cameroon, new snakes (1 gen. 3 spp. n.) ; **Boulenger, 40.**

Kamerun, neue Reptilien und Amphibien ; **Nieden, 241.**

Kamerun, zwei Schildkröten ; **Siebenrock, 305.**

N. America.

On some collections of reptiles and batrachians from the Western United States ; **Stone, 325.**

The toads of the north-eastern United States ; **Miller & Chapin, 226.**

Wisconsin, records of lizards ; **Graenicher, 121.**

Michigan, Amphibians and Reptiles ; **Ruthven, 292, 293 ; Thompson, 334.**

New York, the Anura of Ithaca, a key to their eggs ; **Wright, 380.**

New York, an addition to the list of Staten Island frogs ; **Davis, 79.**

New Jersey, the pine snake [*Pituophis melanoleucus*] at Lakehurst ; **Davis, 78.**

Iowa, notes on reptiles ; **Somes, 313.**

California and Nevada, the lizards of the genera *Phrynosoma* and *Anota* ; **Bryant, 51.**

Texas, herpetology ; **Strecker, 326.**

Georgia, Ophidian notes at Thompson's Mills, North Georgia ; **Allard, 4.**

Central and South America and West Indies.

S. America, Reptilia spp. n. ; **Werner, 362a.**

Notes on Batrachia and Reptilia from the islands north of Venezuela ; **Meek, 219.**

Trinidad, new tree-frog ; **Boulenger, 35.**

Equateur, reptiles et batraciens spp. n. ; **Despax, 86-88.**

Brazil, *Gymnophiona* sp. n. ; **Ihering, 150.**

Brazil, a new *Leptodactylus* and a new *Nototrema* ; **Andersson, 8.**

Andes of S. America, new reptiles ; **Boulenger, 38.**

Argentina, *Amphisbaena* spp. n. ; **Masi, 212.**

Australia, New Guinea, etc.

Queensland, new reptiles and batrachians ; **de Vis, Lamb, Ann. Queensland Mus. 10 pp. 21, 26.**

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ARRANGED BY

W. L. SCLATER, M.A.

CONTENTS

	PAGE
I. TITLES	5
II. SUBJECT INDEX :—	
Comprehensive and General = 5803 :—	
History	62
Biography—General	62
„ Obituaries	62
General Treatises	62
Bibliography	62
Institutions and Collections	63
Technique	63
Economics	63
Bird-protection	63
Aviculture	63
Acclimatisation	64
Nomenclature	64
Structure = 5807 :—	
General Anatomy	64
Plumage and epithelial structures	64
Nervous system and Sense organs	64
Myology	65
Osteology	65
Alimentary System	65
Circulatory System	65
Respiratory System	65
Reproductive and Excretory Systems	65
Blood	65
Physiology = 5811	66
Embryology = 5815	66
Ethology = 5819 :—	
General	67
Food habits	67
Migration, General	68
„ Regional Observations	68
„ of Single Species	69
„ Bird marking experiments	69

	PAGE
Flight and other methods of locomotion	69
Parental relations	70
Sexual relations	70
Nidification, General	70
" Regional Observations	70
" Observations on single species	71
Oology	72
Voice	72
Psychology	73
Colour and Moulting	73
Parasites and Pathology	73
 Variation and Aetiology = 5823 :—	
Variation	74
Teratology	74
Hybrids	74
Heredity and Evolution	75
Extinct birds	75
 Geography = 5827 :—	
General	76
Palaearctic Region	76
Ethiopian Region	82
Indian Region	83
Australian Region	84
Neotropical Region	85
Nearctic Region	86
The Oceans and Antarctic Region	88

III. SYSTEMATIC :—

Rheiformes	88
Struthioniformes	88
Casuariiformes	88
Galliformes	88
Turniciformes	89
Pteroclidiformes	89
Columbiformes	90
Ralliformes	90
Podicipediformes	91
Colymbiformes	91
Sphenisciformes	91
Procellariiformes	91
Alciformes	91
Lariformes	92
Charadriiformes	92
Gruiformes	93
Ardeiformes	94
Phoenicopteriformes	94
Anseriformes	94

	PAGE
Pelecaniformes	95
Cathartidiformes	95
Accipitriformes	96
Strigiformes	97
Psittaciformes	97
Coraciiformes	98
Coccyges	99
Scansores	100
Passeriformes	101
Formicariidæ	101
Dendrocolaptidæ	101
Tyrannidæ	101
Pipridæ	102
Pittidæ	102
Atrichornithidæ	102
Hirundinidæ	102
Muscicapidæ	102
Campophagidæ	103
Pycnonotidæ	103
Timeliidæ	104
Troglodytidæ	104
Cinclidæ	104
Mimidæ	104
Turdidæ	104
Sylviidæ	105
Vireonidæ	107
Ampelidæ	107
Artamidæ	107
Prionopidæ	107
Laniidæ	107
Paridæ	108
Chamæidæ	108
Regulidæ	108
Sittidæ	108
Certhiidæ	108
Zosteropidæ	108
Dicæidæ	108
Nectariniidæ	109
Meliphagidæ	109
Mniotiltidæ	109
Drepanididæ	110
Motacillidæ	110
Alaudidæ	110
Fringillidæ	110
Cœrebidæ	112
Tanagridæ	112

Passeriformes—*continued*.

Ploceidæ	..	..	..	..	..	113
Icteridæ	..	..	..	..	..	114
Sturnidæ	..	..	..	..	..	114
Eulabetidæ	..	..	..	..	..	114
Oriolidæ	114
Dicruridæ	114
Paradiseidæ	114
Ptilonorhynchidæ	114
Corvidæ	114

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Zarudnyj, N. A. *vide* Sarudny.

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[**Zubov, P. S.**] Зубовъ, П. С. О вальдшнепахъ въ Туркестанѣ. [Ueber die Waldschnepfen in Turkestan.] Semja ochotn. Moskva **4** 1911 (332). **1535**

Zumstein, F. Der Schlangennadler als Brutvogel bei Bad Dürkheim. Pfälz. Heimatk. Kaiserslautern **7** 1911 (181-183). **1536**

Biography—General.

THOMAS MUFFETT, biographical and bibliographical notes; **Mullens, 928.**

E. ROSTRUP (1831-1901), biographical notice; **Madsen, 827.**

WILLIAM GAMBEL, M.D.; **Stone, 1326.**

Biography—Obituary Notices.

H. HÖCKE; **Boxberger, 162**; **Grote, 484**; **Thielemann, 1372.**

ALFRED DUCHESSE MILLER; **Haagner, 504**; **W. Sclater, 1261.**

A. B. MEYER; **Sclater, 1258.**

EUGENE WILLIAM OATES; **Ogilvie-Grant, 992.**

CARL PARROT; **Clevisch, 289**; **Hellmayr, 551**; **Kleinschmidt u. Thielemann, 705**; **Schnorr v. Carolsfeld, 1245.**

W. E. D. SCOTT; **Sclater, 1259.**

ROBERT SERVICE; **Gladstone, 458, 459**; **Paterson, 1025.**

George Ernest Shelley; **Edgcumbe, 366.**

FREIHERR RICHARD KÖNIG VON UND ZU WARTHAUSEN; **Bacmeister, 50**; **Lampert, 743.**

General Treatises.

Über die Fortschritte und den gegenwärtigen Stand der Ornithologie; **Reichenow, 1114.**

Die Vögel in Brehms Tierleben, 4th ed.; **Brehm, 173**; Russian edition; **Brehm, 174.**

A natural history of birds in Russian; **Menzbier, 901.**

Il libro degli Uccelli; **Vallon, 1437.**

Caratteri per una classificazione elementare dei Passeracei, Rampicanti e Trogoni; **Cavazza, 238.**

Bibliography.

Aves für 1909. [Jahresbericht]; **Hellmayr, 549.**

Bibliography of Austro-Hungarian Avian literature for 1910; **Tschusi zu Schmidhoffen, 1411**; Ornithological notices in Newspapers and Journals for Austria-Hungary 1910; **Tschusi zu Schmidhoffen, 1418.**

II.—SUBJECT INDEX.

N.B.—For full Reference vide Titles.

COMPREHENSIVE AND GENERAL
5803

History.

An attempt to identify the birds of Homer; **Boraston, 145.**

Robert Burns and the songbirds; **Wilson, 1499.**

Review of the Russian and non-Russian ornithological literature (Russ.); **Buturlin**, 220, 221, 222.

On a copy of Vroeg's Catalogue in the library of the Zoological Society of Amsterdam; **Oort**, 1005.

Institutions and Collections.

X. Jahresbericht (1910) der Vogelwarte Rossitten; **Thienemann**, 1375.

Übersicht der Organisation und Arbeit der Kongl. Ungar. Ornith. Zentrale; **Hermann**, 575.

Catalogue of the collection "Marmottan" of European birds in the "Muséum d'histoire naturelle" at Paris; **Ménégaux**, 897.

Catalogue of the birds in the Museum at Havana, Cuba; **Ragués**, 1094.

Technique.

A practical guide to bird photography; **Beetham**, 112.

Das Photographieren von Nestern und Eiern; **Schulz**, 1250.

The application of photography to the mensuration of birds; **Vincent**, 1444.

Sichtbarkeitsgrenzen von Vögeln für die Augen der Verfasser; **Lucanus u. Heinroth**, 801.

Détermination du sexe de l'oiseau à l'autopsie; **Ménégaux**, 898.

Economics (see also under Food-habits, p. 67).

Vom Nutzen und Schaden unserer Vögel; **Zimmermann**, 1533.

The usefulness of so called destructive birds; **Poncus**, 1077.

Bird-protection and Insect-destruction; **Losy**, 791.

The relation of birds to a butterfly, which became a plague in northern California during the spring and summer of 1911; **Bryant**, 194.

Woodpeckers in relation to trees and wood products; **McAtee**, 808.

Food of the Woodpeckers of the United States; **Beal**, 105.

Birds of California in relation to the fruit industry; **Beal**, 104.

Economics of *Corvus frugilegus* in Denmark; **Boas**, 135.

Ausrottung der Sperlinge (*Passer*) (Norweg.); **Schøyen**, 1248.

Der Kreuzschnabel als Waldverderber; **Schleicher**, 1236.

Nutzen von *Parus major* durch Vertilgung der Raupen des Goldafters (Russ); **Kurdiumov**, 737.

Ueber die Straussenzucht; **Bassermann**, 96, 97.

Also **Butler**, 209: **Lasnier**, 747: **Maxwell**, 879.

Bird-Protection.

Bird protection in Hungary 1909-11; **Csörgey**, 312.

Bird protection in German forests; **Haenel**, 506.

Schutz dem *Ardea cinerea*; **Besserer**, 123.

Wild bird protection in India and the traffic in plumage; **Dodsworth**, 340.

Bird protection and the plumage trade; **Ménégaux**, 896: The plumetrade in America; **Ménégaux**, 899.

The preservation and management of Partridges and Partridge Manors; **Maxwell**, 879.

Aviculture.

Avicultural notes from the Zoological Gardens; **Seth-Smith**, 1273.

Avicultural notes on some European birds rarely kept in captivity; **Heinroth**, 547.

The birds which have bred at Gooilust Park in Holland; **Blaauw**, 130.

Fijian birds in captivity; **Bahr**, 53.

Longevity and relative viability in the birds in the Zoological Gardens in London; **Mitchell**, 918.

Duration of life in captivity; **Butler**, 207.

Avicultural experiences in Demarara; **Dawson**, 321.

Avicultural notes on—*Struthio*; **Bassermann**, 96: *Columba leuconota*; **Newman**, 949: *Otidæ*; **Cerepova**, 240 and **Siškin**, 1292: *Gruidæ*; **Cosgrave**, 300: *Anatidæ*; **Heinroth**, 548: *Benicla melano-*

ptera, **Blaauw**, 129: *Querquedula cyanoptera*, **Seth-Smith**, 1274: *Porphyrocephalus spurius*, **Astley**, 40: *Dendrocopus minor*; **Galloway**, 435: *Daulias philomela*; **Teschemaker**, 1362: *Loxia curvirostra*; **Currey**, 314: *Hedymeles ludovicianus*; **Astley**, 41: *Poëphila mirabilis* and *P. gouldiae*; **Besnier**, 121: *Sericornis melinus*; **Phillips**, 1048: *Corvidae*; **Riegler**, 1137.

Acclimatisation.

Notes on the successful introduction of the Red Grouse into the moorlands near Spa, Belgium; **Somerville**, 1309.

The acclimatization of Francolins and the Prairie Hen (*Tympanuchus*) in France; **Magaud d'Aubusson**, 831, 832.

Paradisea apoda introduced into Little Tobago, West Indies; **Ingram**, 624.

Introduction of *Leipoa ocellata* on Kangaroo Is., South Australia; **Mellor**, 892.

Minor notice.—**Gebhardt**, 439.

Nomenclature.

The generic names of the swallows discussed; **Hartert**, 536.

Alterations in the nomenclature, chiefly of Australian birds; **Mathews**, 860, 870.

Minor notices.—**Brabourne & Chubb**, 165: **Buturlin**, 217: **Kleinschmidt**, 700: **Riley**, 1140: **Rothschild & Hartert**, 1179.

Zur Kenntniss deutsch-tirolischer Vogelnamen; **Anzinger**, 24.

STRUCTURE. 5807

General Anatomy.

Anatomie der Vögel (Russ.); **Gurin**, 492.

Anatomy of the Grouse (*Lagopus scoticus*); **Lovat**, 797.

Plumage and epithelial structures.

The regeneration of feathers and their relation to Reptilian scales; **Bornstein**, 146.

Down-plumage and mouth-colouration of some nestling birds; **Dunlop**, 361.

Remarks on pterylography of the *Ploceidae*, *Sylviidae* and *Pycnonotidae*; **Bates**, 98, p. 627.

The structure of the wing of the Partridge (*Perdix perdix*) and determination of its age; **Bureau**, 202.

Structural peculiarities of the crown-feathers of *Rallus aquaticus*; **Bonhote**, 139, 142.

Sequence of nesting plumage in *Bubo ignavus*; **Bonhote**, 140.

Remarks on the down-plumage of the Barn-Owl (*Strix flammea*); **Pycraft**, 1090, 1093.

The undescribed juvenal plumage of *Cissilopha yucatanica*; **Beebe** and **Crandall**, 111.

Palates and tongues and their spots in some Cameroon birds, described and figured; **Bates**, 98.

Ueber angebliche Zahnanlagen bei Vögeln; **Inde**, 621.

The dentition of the toothed birds; **Terra**, 1360.

Die Fänge der Raubvögel; **Hennicke**, 570.

The claw of the pollex in *Porphyrio melanotus*; **Seth-Smith**, 1271.

Particolari ghiandole in *Struthio*; **Vallillo**, 1436.

Cellule speciali in epiteli del Colombo; **Arcangeli**, 31.

Recherches sur la genèse des fibrilles épidermiques chez le poulet; **Firket**, 399.

Sur l'anatomie de la glande uropygienne; **Paris**, 1018.

The structure, development and functions of the Bursa Fabricii; **Jolly**, 649, 650, 651.

Morphology of the Bursa Fabricii; **Osawa**, 1006.

A rudimentary pre-pollex in the chick; **Barfurth**, 90: and experiments in the transmission of hyperdactyly in fowls; **Barfurth**, 88.

Nervous System and Sense Organs.

Die exogenen und endogenen Bahnen des Rückenmarks der Taube mit der Degenerationsmethode untersucht; **Kühn und Trendelenburg**, 735.

Régénération des centres nerveux chez le Pigeon; **Lefeuve, 760.**

Knäuelartige Nervenendigungen in der Vogelhaut; **Botezat, 149.**

Zur Frage nach den Ganglien in den Herzkammern; **Pisskunoff, 1060, 1061.**

The eyes and eyesight of birds, with especial reference to the appearances of the fundus oculi; **Wood, 1517.**

Der Ort des deutlichen Sehens in der Netzhaut; **Fritsch, 429.**

Zur Kenntnis der im Tectum opticum entstehenden Bahnen; **Frenkel, 428.**

Ist der Pecten des Vogelauges ein Sinnesorgan?; **Blochmann und Husen, 132.**

The ciliary ganglion of birds; **Carpenter, 233; Lenhossék, 764, 766.**

Die Entwicklung und Bedeutung der Zonula ciliaris; **Lenhossék, 765, 768.**

Die Entwicklung und Bedeutung der Zonulafasern; **Lenhossék, 767.**

The morphology of the avian olfactory organs; **Strong, 1334.**

Myology.

Ueber die Bedeutung des Musculus ambiens für die Beugung der Zehen; **Brauer, 167.**

Osteology.

The skeleton of *Palaeocorax moriorum*; **Pycraft, 1092.**

Schädel von *Fratercula arctica* (Russ.); **Mäurodiadi, 878.**

Note on a broken leg in the White-rumped Shrike (*Lanius ludovicianus excubitorides*); **Kennedy, 680.**

Histology of the ossifying tendon; **Retterer & Lelièvre, 1129.**

Alimentary System.

The intestinal tract, its primitive form, its evolution, its relationship to the nature of food and its coils; **Beddard, 109.**

Étude des types appendiciels de la muqueuse intestinale, en rapport avec les régimes alimentaires; **Bujard, 197.**

(N-9186 g)

Morphology of the avian caecum; **Magnan, 834:** On the relation between the surface of the proventriculus and the thickness of the muscles of the gizzard; **Magnan, 835:** Relative lengths of the large intestine and caecum; **Magnan, 836:** On the relative sizes of the proventriculus and gizzard; **Magnan, 837:** The superficial area of the intestine; **Magnan, 839.**

On the digestive system of *Hydrocorax* and the moulting of the stomach-lining; **Curl, 313.**

Circulatory System.

Vergleichende Untersuchungen über die Maasse und Proportionsgewichte des Vogelherzens; **Löer, 785.**

Ueber die Herzmuskelklappe des australischen Strausses; **dal Piaz, 1054.**

Morphological study of the avian spleen; **Magnan and Riboisière, 840.**

Respiratory System.

Observations comparatives sur les rapports du poumon et des sacs aériens; **Juillet, 665:** Rapports de sacs aériens et des bronches; **Juillet, 664:** The ventral face of the lungs of birds; **Juillet, 667.**

Reproductive and Excretory Systems.

On the structure of the male reproductive organs; **Trawiński, 1409.**

On the size of the testes in those males of *Calidris arenaria* which remain on the British Coasts in summer; **Patten, 1027.**

The persistence of the right ovary in some birds; **Picchi, 1057.**

Le canal de Wolff chez la femelle adulte des oiseaux; **Chappellier, 254.**

Blood.

Über Genesis und Morphologie der roten Blutkörperchen; **Venzlaff, 1442:** Ueber die Form der roten Blutkörperchen; **Venzlaff, 1443.**

On the dimensions of the red blood-corpules in birds; **Magnan, 838.**

PHYSIOLOGY. 5811

Nervous System.

Die funktionellen Schwankungen der motorischen Tätigkeit des Raubvogelmagens; **Mangold, 845.**

Die Magenbewegungen der Krähe und Dohle und ihre Beeinflussung vom Vagus; **Mangold, 844.**

The olfactory organs and the sense of smell in birds; **Strong, 1334.**

See also: **Blochmann u. Husen, 132; Fritsch, 429; Kuhn and Trendelenburg, 735; Lefevvre, 760; Wood, 1517.**

Nutrition.

Influence du régime alimentaire sur le gros intestin et le cæcum des Oiseaux; **Magnan, 836**: Physiological significance of the avian cæcum; **Magnan, 834.**

Le jeûne nocturne et la réserve de glycogène chez les petits oiseaux; **Lapicque, 745.**

Sur la nutrition des petits Oiseaux; **Lapicque, 744.**

Recherches organométriques en fonction du régime sur les Oiseaux; **Riboisière, 1132.**

Sur les modifications du poids des organes lymphoïdes à la suite du jeûne; **Jolly et Levin, 653.**

Anti-thrombine present in the liver of birds; **Doyon and Policard, 351.**

A comparison of the area of the wing surface, the weight of the pectoral muscles and the food material among birds; **Houssay and Magnan, 602.**

The function of the Bursa Fabricii; **Jolly, 650.**

The histological results of fasting on the Bursa Fabricii; **Jolly, 652.**

Physiology of the Bursa Fabricii; **Osawa, 1006.**

See also: **Bujard, 197; Michalowsky, 906.**

Respiration.

Über die Atemfrequenz unserer Hausvögel; **Löer, 786.**

On apnoea in birds; **Foà, 408, 409.**

On the body temperature of the domestic fowl during incubation; **Simpson, 1291.**

Sur la fonction hématopoïétique de la rate pendant la période embryonnaire; **Jolly, 648.**

Excretion and Reproduction.

Recherches histophysiologiques sur le rein; **Policard et Laccassagne, 1073.**

Studies on the physiology of reproduction in the domestic fowl; **Pearl, 1031.**

On the activity of the ovaries of a hybrid Goldfinch × Canary; **Chappellier, 256.**

Regeneration.

Ueber die Transplantation der Taubenhaut in die Taube und in andre Tierarten; **Loeb und Addison, 784.**

See also: **Lefevvre, 760.**

EMBRYOLOGY. 5815

General.

Beiträge zur Entwicklungsgeschichte der *Colymbidae*; **Rosenberg, 1161.**

Die ersten Entwicklungsstadien von *Sterna macrura* und *Columba livia* (Russ.); **Mitrofanov, 920.**

Early Stages.

Sur la croissance de l'aire vasculaire des embryons d'oiseaux sains et placentaires; **Tur, 1422.**

Beobachtung von Wachstumsvorgängen an Reihenaufnahmen lebender Hühnerembryonen; **Gräper, 464.**

The earliest stages in the differentiation of sex in the fowl; **Thomsen, 1381.**

Limbs and Head.

Zur Entwicklung der Vogelextremität; **Sieglbauer, 1284.**

Ein rudimentärer „Praepollex“ beim Hühnchen; **Barfurth, 90.**

The development of the fore part of the bird's head; **Rex, 1130.**

Di un'interessante derivato della prima fessura branchiale nel passero; **Vitali, 1447.**

Development of the fowl's head and skull; **Hansemann, 519.**

Nervous System.

Peculiar subdivision of spinal canal of chick embryos; **Kelsey, 678.**

On the development of the optic lobes of the fowl; **Oliver, 995.**

The early stages in the development of the sympathetic nervous system in the chick; **Kuntz, 736.**

See also; **Lenhossék, 765, 767, 768.**

Alimentary System.

Der Entwicklung der sekretorischen Zelle des Drüsenmagens; **Michalovsky, 906.**

The development of the Bursa Fabricii; **Osawa, 1006.**

Respiratory and Vascular System.

Ueber die erste Anlage der Lungen und der Nebengekröse einiger Vogelarten; **Rösler, 1163.**

Later stages in the development of the lungs in the fowl; **Juillet, 666.**

The development of granular leucocytes in birds; **Kollmann, 720.**

Sur la fonction hématopoïétique de la rate pendant la période embryonnaire; **Jolly, 648.**

See also; **Venzlaff, 1442.**

Excretory & Reproductive Organs.

Sviluppo del canale di Müller in *Passer*; **Lunghetti, 805.**

Spermatogenesis and the ovary and ovum among hybrid ducks; **Poll, 1075, 1076.**

Histogeny.

Genesi delle fibre collagene ed elastiche in *Columba* e *Gallus*; **Livini, 783.**

See also; **Firket, 399.**

Parthenogenesis.

Les divisions cellulaires dans la segmentation de l'œuf non fécondé; **Lécailon, 756, 757.**

(N-9186 g)

Experimental Embryology.

Entwicklung centrifugierter Hühner-eier (Russ.); von **Stein, 1314.**

Wirkung des Radium auf die embryonale Entwicklung des Hühnchens (Russ.); **Ivanov, 631.**

The action of X-rays on the developing chick; **Gaskell, 437.**

Einfluss der Gase auf das Geschlecht der Hühnchen (Russ.); **Kovalevskij, 727.**

The transplantation of the ovary in chickens; **Davenport, 316.**

Sur la spécificité de l'anaphylaxie qui existent entre le blanc d'œuf, l'extrait d'embryon et le sérum de poule; **Heurlin, 587.**

L'incubation artificielle en Egypte; **Magaud d'Aubusson, 830.**

ETHIOLOGY. 5819

General.

The Ethology of the *Anatidae*; **Heinroth, 548.**

Ein anfänglich gut gelungener Versuch zur Vermehrung der Vögel in einer bestimmten Gegend. (Holländisch); **Ritzema-Bos und Wolda, 1144.**

Einwirkung warmer Sommer auf die Vogelkleider der ersten Jugendform; **Schuster, 1255.**

The form of the bill and its adaptation to habitat; **Gengler, 443.**

Einfluss einer Eierstocksgeschwulst auf das Gefieder einer Henne (Russ.); **Skriabin, 1296.**

Game birds and their broods killed by lightning; **Fortune, 425.**

Luminous birds; **Denise, 329.**

Food-habits.

Beiträge zur Ernährungsbiologie der Tiere; **Rörig, 1159.**

Le jeûne nocturne et la réserve de glycogène chez les petits oiseaux; **Lapicque, 745.**

The insectivorous habits of birds; account of experiments in the Zoological Gardens; **Pocock, 1068.**

The insectivorous habits of the birds in Bourbon, Mauritius and Ceylon; **Manders, 843.**

Birds feeding on butterflies in West Africa; **Bates, 98** [p. 630]: in California; **Bryant, 194**: in India; **Andrewes, 15**: in Germany; **Auel, 44.**

A list of the birds which feed on Libellulidae; **Martin, 851.**

Contents of stomachs and crops of Australian birds; **Cleland, 287.**

The food-habits of Birds of Prey, **Leisewitz, 763**; of Owls, **Rörig, 1160** and **Greschik, 467**; and of Woodpeckers in the United States; **Beal, 105.**

The food-habits of: *Phasianus colchicus* and *Columba palumbus*, **Pethybridge, 1044**; *Podiceps auritus*, **Cleaves, 284**; *Otis tarda*, **Mozgalevskij, 927**; *Buteo buteo*, **Fuye and Dumast, 434**; *Buteo platypterus*, **Ramsden, 1099**; *Falco tinnunculus* and *Asio otus*, **Geyr von Schweppenburg, 449**; *Lophoceros beirostris*, **Newnham, 951**; *Oroscoptes montanus*, **Kennedy, 679**; *Lanius collurio*, **Szeöts and Csiki, 1348**; *Uroloncha punctulata* and *Sporaeoginthus amandava*, **Inglis, 622**; *Molothrus ater*, **McAtee, 809**; *Garrulus glandarius*, **Fuye, 433**; *Corvus corone*, **Duret, 362.**

Migration (General).

General remarks on migration, **Braun, 170, 171**; **Franz, 427**; **Graeser, 462**; **Hegyfoky, 546**; **Huxley, 620.**

The influence of weather on the spring migration in 1910; **Hegyfoky, 545.**

Witterung und Vogelzug. (Un-garisch); **Endrey, 378.**

On the height in the air at which birds migrate; **Lucanus, 800.**

Migration (Regional observations).

GREAT BRITAIN AND IRELAND: Report on the immigrations of summer migrants into Great Britain in the spring of 1910 and lighthouse reports for the autumn of 1909; **Ogilvie-Grant, 978**: migration in the Solway area, Scotland; **Service, 1268**: Dates of arrival of summer birds in the Clyde area 1911; **Paterson, 1026**: The migration rush of the night of March 29th-30th in Ireland; **Barrington, 94.**

FRANCE, Migration routes through France; **Gromier, 483**: Migration dates in Dept. Charente; **Delemain, 326**: Migration dates in Dept. Gard; **Chapel, 246**: Premature arrival of birds in autumn 1910 in Dept. Sarthe; **Lamoureux, 742.**

GERMANY, II. Jahresbericht der Vogelwarte der Kgl. Biologischen Anstalt auf Helgoland 1910; **Weigold, 1470**: Zum Vogelzug auf der Insel Sylt 1908 1909; **Hagendefeldt, 510**: Migration notes near Bamberg, Bavaria; **Ries, 1138.**

AUSTRO-HUNGARY, Migration notes near Vienna; **Donner, 347**: Ankunfts- und Abzugsdaten bei Hallein (1910); **Tschusi zu Schmidhoffen, 1417**: Ankunfts- und Abzugsdaten aus Mariahof in Stiermark, 1910; **Noggler, 966**: The spring migration of 1910 in Hungary; **Lambrecht, 741.**

HOLLAND, Migration dates in 1910; **Ekama, 373**; **Snouckaert, 1303**: Winter- und Frühjahrs-Beobachtungen in der Gegend von Roermond, Holland; **Hens, 572.**

SCANDINAVIA, Report on birds observed at the Danish Lighthouses in 1910; **Winge, 1504**: Migration notes from the district of Halmstad, Sweden; **Hollgren, 596.**

RUSSIA, Spring migration in the Russian Baltic Provinces, 1911; **Grevé, 468**: Anfang des Herbstzuges an des Süd-Westküste von Oesel; **Champenhansen, 242.**

ITALY, Migration in northern Italy; **Bonelli, 136.**

CHINA, Migration notes from the Wei Hai Wei neighbourhood; **Jones, 655.**

SOUTH AFRICA, Migration report of the S.A.O.U. 1909-1911; **Haagner, 503.**

EAST AFRICA, European migrants in British East Africa; **Percival, 1040.**

INDIA, Migration notes at Sehor in Central India; **Whitehead, 1487.**

NEW ZEALAND, The migratory birds of New Zealand; **Reid, 1124.**

UNITED STATES, Report on spring migration of 1910 in New Jersey and Pennsylvania; **Stone, 1327**: Observations on the spring migration (1910) at Ann Arbor, Michigan; **Tinker, 1399**: On the migration of *Anatidae* at

Wenham Lake, Massachusetts; **Phillips, 1051**: The migration of North American sparrows; **Cooke, 299**.

CANADA, Raptorial migration at Point Pelee, S. Ontario; **Taverner, 1354**: The spring migration at Fishermans Island, Toronto, in 1910; **Munro, 929**.

Migration of Single Species.

Tetrao tetrrix, in Russia; **Kišenskij, 689**: *Coturnix coturnix*, in the Crimea; **Pleščejev, 1063**.

Syrhaptus paradoxus, in Südost-Russland (Russ.); **Karamsin, 672**.

Fulica atra, in Bedfordshire; **Elliott, 377**.

Larus ridibundus, Migration route from the Baltic to Italy; **Ghigi, 453**: Migration movements in Finland; **Brenner, 175**.

Gallinago stenura and *G. major*, migrations in India; **Baker, 61**: *G. major* on the sea of Azoff; **Egorow, 367**.

Scolopax rusticola, spring migration in Mecklenburg; **Grundlach, 488**.

Ciconia ciconia, spring migration in 1910; **Hennemann, 565**: spring migration in European Russia; **Kaigorodov, 668, 669**: reports from Rossitten; **Thienemann, 1377**.

Nettion crecca, a case of the migration and return in Massachusetts; **Phillips, 1053**.

Mergus serrator in the United States; **Townsend, 1406**.

Cryptoglaux acadia in the United States; **Taverner and Swales, 1355**.

Chaetura acuticauda, effect of weather conditions on the arrival and movements in Australia; **Dove, 349**.

Cypselus apus in Austria; **Tschusi zu Schmidhoffer, 1416**.

Cuculus canorus, observed on migration near Havre; **Ternier, 1359**: movements in Russia; **Kaigorodoff, 668**.

Hirundo rustica, fresh studies on Swallow migration in France; **Kirchner, 687**: spring migration in Germany; **Hennemann, 565**.

Daulias luscini and *D. philomela*; **Butler, 208**.

Parus major major, in England; **Ticehurst, 1391**.

Motacilla alba in Ireland; **Warren, 1454**.

Acanthis linaria, the invasion in Scotland in 1910; **Evans, 382**: in Germany; **Weigold, 1472**.

Loxia curvirostra, irruption in the British Isles in 1909; **Witherby and Alexander, 1511**: in Westphalia; **Hennemann, 567**: in Italy; **Cavazza, 239**: in western Russia; **Scharleman, 1228**: in Turkestan; **Sarudny, 1202**.

Nucifraga caryocotetes, movements and migrations in Norfolk, England; **Gurney, 497**: in Germany; **Kleinschmidt, 669**: **Plettenberg, 1065**: **Reichenow, 1123**.

Garrulus glandarius in Austria; **Bau, 100**.

Corvus frugilegus, in Russia; **Kaigorodoff, 668**.

Bird Marking Experiments.

Bird-marking with special reference to the Aberdeen University scheme; **Thomson, 1382**.

General account of the bird-marking experiments at Rossitten, Germany; **Thienemann, 1374**: in Bavaria in 1910; **Stresemann, 1333**: in Hungary in 1911; **Schenk, 1231**: in Holland; **Oort, 1003**: in Denmark; **Mortensen, 925**.

Critical remarks on bird marking; **Christoleit, 266**.

Records of the recapture of marked birds; **Ticehurst, 1387**: **Witherby, 1512**.

Accounts of the marking and recapture of *Larus ridibundus*, **Parrot, 1022**: *Querquedula crecca*, **Bartholomew, 95**: *Ardea cinerea*, **Rendtorff, 1127**: *Cypselus apus*, **Tschusi, 1419**: *Hirundo rustica*, **Szeöts, 1347**.

Flight and other Methods of Locomotion.

Thoughts on the flight of birds and men; **Barnet-Rivet, 72**: Bird-flight and Aviation; **Lilienthal, 774**: Aviation and Ornithology; **Herman, 574**: Der Maschinen- und Vogelflug; **Popper-Lynkeus, 1086**.

Über den Flug der Vögel und der Käfer (Ungarisch); **Lovas, 795.**

The "vol plané" of the flight of birds; **Dinelli, 335: Tydeman, 1425.**

The evolution of the fore-limb and of flight; **Abel, 2.**

Untersuchungen über die Schnelligkeit des Vogelfluges; **Thienemann, 1378: Knauer, 711.**

The positions assumed by birds when alighting from flight; **Beetham, 113.**

Some diving notes on Cormorants; **Clay, 281.**

Bathing methods among birds; **Christoleit, 264.**

Parental Relations.

Oologisch-biologische Betrachtungen und Versuche an Drosseln; **Drescher, 352.**

Cock Patridges mothering chicks hatched in an incubator; **Fortune, 424.**

Ein alter Kuckuk einen jungen fütternd; **Klein, 693.**

Sexual Relations.

Das Liebesleben in der Vogelwelt; **Gengler, 442.**

Sex problems in birds; **Gladstone, 457.**

The influence of castration on the secondary sexual characters in Gallinaceous birds; **Pezard, 1046.**

The courtship display of *Polyplectron chinquis*; **Pocock, 1067.**

The fighting and display of *Machetes pugnax*; **Grobbels, 481.**

The nuptial plumes of *Botaurus lentiginosus*; **Brewster, 178.**

Courtship of the American Golden-eye (*Clangula clangula americana*); **Brewster, 179.**

The courtship of the Red-breasted Merganser (*Mergus serrator*); **Townsend, 1406.**

Dauerehe von *Apus apus*; **Thienemann, 1376.**

Accoppiamento fra *Anser dom.* e *Pavo dom.*; **Serra, 1267.**

Paarung eines Enterichs mit Hühnern (Russ.); **Skrjabin, 1295.**

Nidification (General).

Die Bedeutung der Oologie für die Systematik; **Szielasko, 1346.**

Nests and nest-building in birds; **Herrick, 579.**

Sur la persistance de certains Passereaux à pondre dans leurs nids après l'enlèvement des premiers œufs; **Rouget, 1184.**

Ueber das Sich-tot-legen-lassen von Vögeln; **Kreymborg, 731.**

Die tierischen Baustoffe der Vogelnester; **Krohn, 733.**

Nachbarliche Beziehungen in der brütenden Vogelwelt unseres Vaterlandes; **Thielemann, 1371.**

On the breeding seasons of African birds; **Zedlitz, 1532.**

Oviposition in young Ostriches; **Rivière, 1146.**

Töten starke Schallwirkungen Vogel-junge in Eiern?; **Schuster, 1256.**

Nidification (Regional observations).

FRANCE, Eggs and nests of Corsican birds; **Jourdain, 659.**

GERMANY, Brutnotizen zur Ornithologie Marburgensis aus dem Jahre 1910; **Boxberger, 159: Brutnotizen 1910 aus dem unteren Bodetale; Hübner, 611.**

SCANDINAVIA, On great hatches of raptorial birds in Denmark in the year 1910. (Danish); **Nørgaard, 967: Breeding habits of some British winter birds in northern Sweden; Sheldon, 1276: Nests and eggs taken in Lapland figured and described; Schulz, 1249.**

SWITZERLAND, Nesting habits of Swiss birds; **Flückiger, 407.**

RUSSIA, Nisten der Vögel an der Murman-Küste (Russ.); **Maurodiadi, 878.**

PALEARCTIC ASIA, Oologische Tagebuchnotizen aus Palästina 1910; **Schmitz, 1242: Nistende Vögel im Gebiet Batum (Russ. + deutsch. Rés.); Nesterov, 942: Nesting notes near Wei Hai Wei in north-east China; Jones, 655.**

ETHIOPIAN REGION, Cameroon nests and eggs of various species described and figured; **Bates, 98: The collection**

of birds-eggs in the Transvaal Museum; **Gunning, 490**: On some nests and eggs from Mount Chirinda in Southern Rhodesia; **Swynnerton, 1345**: Random notes from Uganda; **Seth-Smith, 1275**: Nests and eggs of Kilimanjaro birds; **Sjöstedt, 1293**.

INDIAN REGION, Birds nests and eggs in Garhwal, India; **Whymper, 1491**: Nests and eggs of Burmese birds; **Harington, 521**: On nests and eggs of Philippine sea birds; **Worcester, 1523**.

AUSTRALIAN REGION, Nests and eggs of birds breeding in Australia and Tasmania; **North, 968**: Notes on the nests of some Australian birds; **Mathews, 868**: Nesting notes from the Cape York district, Queensland; **Barnard, 91**: Nesting notes on New Zealand bush birds; **M'Lean, 818**.

NEOTROPICAL REGION, Notes on the nests and eggs of some birds collected in Argentina; **Grant, 463**.

NEARCTIC REGION, Nesting notes on the Farallones, California; **Dawson, 323**: May notes from San Jacinto lake, Cal.; **Willett and Jay, 1496**: Nesting notes on the ducks of the Barr lake region, Colorado; **Rockwell, 1154**.

Nidification (Observations on Single Species).

RATITAE, *Struthio*; **Mitchell, 919**.

GALLIFORMES, *Guttera pucherani*; **Gurney, 493**: [*Colinus*] *Ortyx cubanensis*; **Astley, 42**.

COLUMBIFORMES, *Zenaidura carolinensis*; **Kennedy, 681**.

RALLIFORMES, *Rallus elegans*, *R. virginianus*; **Miller, 914**: *Gallinula galeata*; **Burtch, 205**.

PROCELLARIIFORMES, *Pterodroma leucoptera*; **Hull, 617, 618**.

LARIFORMES, *Hydrochelidon surinamensis* and *Sterna forsteri*; **Rockwell, 1153**: *S. fluviatilis*; **Borrer, 147**: *Larus heermanni*; **Thayer, 1370**: *Pagophila eburnea*; **Haag, 500**: *Catarracta skua*; **Boxberger, 161**.

CHARADRIIFORMES, *Eurynorhynchus pygmaeus*; **Thayer, 1366**: *Gallinago gallinago*; **Koolf-Volkonskij, 721**.

ANSERIFORMES, *Cygnus bewicki jankovskii*; **Jourdain, 660**: *Cereopsis novaec-*

hollandiae; **M'Gowan, 813**: *Philactes canagica*; **Munt, 932**.

PELICANIFORMES, *Phalacrocorax auritus*; **Smith, 1297**: *Sula brewsteri*; **Thayer, 1370**.

ACCIPITRIFORMES, *Vultur monachus*; **Bouvier, 152**: **Jourdain, 661**: **Marshall, 849**: *Accipiter nisus*; **Selous, 1266**: *Falco peregrinus*; **Rüdiger, 1188**: *Cerchneis tinnunculus*; **Patten, 1028**: [*Erythropus*] *Cerchneis vespertina*; **Schenck, 1230**.

STRIGIFORMES, *Bubo virginianus*; **Keyes, 684**: **Warren, 1453**: *Syrnium lapponicum*; **Olofsson, 996**.

PSITTACIFORMES, *Trichoglossus septentrionalis*; **White, 1483**: *Psephotus haematorrhous*; **Parker, 1019**.

HALCYONES, *Halcyon barnardi*; **White, 1483**: *Aleyone pusilla*; **M'Gillivray, 812**.

CAPRIMULGI, *Antrostomus vociferus*; **Du Bois, 353**.

TROCHILI, *Coeligena clemenciae*; **Willard, 1495**.

TROGONES, *Trogon*; **Werner, 1479**.

CUCULI, *Cuculus canorus*; **Čapek, 231**: *Coccyzus u. occidentalis*; **Jay, 639**: **Shelton, 1277**.

TYRANNIDAE, *Empidonax difficilis*; **Myers, 935**.

HIRUNDINIDAE, *Clivicola riparia*; **Haglund, 512**: *Hirundo* sp.; **Lakowitz, 739**.

MUSCICAPIDAE, *Gerygone cinerascens*; **Mathews, 871**.

CAMPOPHAGIDAE, *Perierocotus brevirostris*; **Dodsworth, 340a**.

TIMELIDAE, *Calamanthus montanellus*; **White, 1485**: *Lioptila capistrata*; **Dodsworth, 342**; *Staphidia striata*; **Cook, 297**: *Liothrix luteus*; **Fehring, 395**.

TROGLODYTIDAE, *Salpinctes obsoletus pulverius*; **Linton, 780**: [*Anorthura*] *Troglodytes troglodytes*; **Weimer, 1476**.

TURDIDAE, [*Merula*] *Turdus merula*; **Chappelier, 255**: **Kreff, 730**: *Geocichla citrina*; **Astley, 42**: [*Turdus*] *Planesticus m. propinquus*; **Kennedy, 681**: *Microcichla scouleri*; **Dodsworth, 343**: [*Aëdon*] *Daubias philomela*; **Teschemaker, 1362**.

SYLVIIDAE, *Stipiturus mallee*; **Howe, 604**; *Sphenura broadbenti*; **Ross, 1164**.

AMPELIDAE, *Bombycilla cedrorum*; **Saunders, 1222**.

PRIONOPIDAE, *Collyriocichla superciliosa*; **White, 1484**.

LANIIDAE, *Cracticus mentalis*; **White, 1483**.

CHAMAEIDAE, *Chamaea fasciata hen-shawi*; **Bowles, 157**.

DICAEDAE, *Dicaeum cruentatum*; **Kershaw, 683**.

MELIPHAGIDAE, *Xanthotis filigera*; **White, 1483**; *Acanthochaera carunculata*; **Dove, 350**.

MNIOTILTIDAE, *Mniotilta varia*; **Bales, 68**; **Stanwood, 1313**; *Protonotaria citraea*; **Allen, 8**; *Vermivora ruficapilla*; **Stanwood, 1312**; *Dendroica fusca*; **Harrower, 528**; *D. castanea*; **Stanwood, 1311**.

FRINGILLIDAE, *Coccothraustes vulgaris*; **Teschemaker, 1363**; *Fringilla coelebs*; **Read, 1111**; *Leucosticte tephrocotis littoralis*; **Moody, 923**; [*Petronia*] *Passer petronius*; **Lindner, 778**; **Mayhoff, 880**; *Passer montanus*; **Babin, 47**; **Rivière, 1145**; *Loxia curvirostra*; **Jourdain and Carroll, 663**; **Silver, 1285**; **Peabody, 1030**; *Junco hyemalis pinosus*; **Ray, 1108**.

PLOCEIDAE, *Emblema picta*; **Phillipps, 1047**.

CORVIDAE, *Struthidea cinerea*; **Seth-Smith, 1270**; *Corvus corax sinuatus*; **Harlow, 526**.

Oology (see also under Nidification).

Oologia universalis palaeartica. Lfg 54-72; **Krause, 728**.

Oologia Neerlandica; **Pelt-Lechner, 1037**.

Die phylogenetische Entwicklung der Vogeleschale; **Boxberger, 163**.

Ueber Spareier; **Haag, 501**.

Les œufs anomaux; **Etoc, 379**.

Über Pinguineier; **Clevisch, 290**.

Note on abnormally coloured eggs of *Uria troile*, *Pyrrhura europaea*, *Sylvia atricapilla* and *Linota cannabina*; **Bunyard, 198**.

Note on the eggs of *Limosa lapponica*, *Sterna fluviatilis*, *Emberiza rustica* and *Pavoncella pugnax*; **Bunyard, 199**.

Voice.

Probleme der Vogelstimmenkunde; **Voigt, 1448**.

The song of some birds reduced to musical form; **Matunak, 877**.

Bemerkungen über Vogelgesang; **Hornbostel, 601**.

Gesang und Nachahmung; **Gröbbels, 482**.

Über die Veränderlichkeit des Vogelliedes im Freileben und in der Gefangenschaft; **Braun, 169**.

Sur le mutisme de quelques oiseaux pendant la reproduction; **Raspail, 1102**.

Les Passereaux qui chantent avant le lever du Soleil; **Raspail, 1103**.

When do the birds begin to sing in the morning? (Danish); **Koch, 713**.

Gesang und Befähigung zur Nachahmung (Russ.); **Ognev, 994**.

Auffällige Grössenunterschiede und häufig damit in Zusammenhang stehende Gesangseigentümlichkeiten bei unseren Singvögeln; **Anzinger, 25**.

New Zealand bird-song; **Andersen, 12**; **M'Lean, 818**.

Observations on the song periods of various British birds; **Alexander, 6**.

Tetrao urogallus, Herbstbalz (Russ.); **Karëjev, 674**.

Turtur semitorquatus and other East African doves, on the notes; **Schuster, 1253**.

Gallinago gallinago; **Hagen, 507**; **Heyder, 588**.

Philohela minor, some notes on the spring song; **Rich, 1133**.

Glaucidium passerinum; **Ušakov, 1432**.

Picus martius, 'Trommelzeichen' an einer Starmäste; **Loos, 788**; **Grobbels, 481**.

Mimus polyglottos, call-note and song; **Bailey, 60**.

Passer, Chant du moineau; **Ardré, 13**.

Turdus musicus, einige Bemerkungen zum Gesang; **Lindner, 777.**

Fringilla coelebs, the singing competitions; **Grobbs, 481.**

Psychology.

Ein Beitrag zur Psychologie; **Witzlsteiner, 1516.**

Beiträge zur Psychologie; **Lucanus, 799.**

Problems of avian psychology; **Menegaux, 894.**

Vom Instinkt der Vögel; **Brückner, 192.**

Untersuchung des Farbensinnes der Vögel nach dem Prinzip der Seebeck-Holmgrenschen Probe; **Hess, 584.**

L'immobilité dans le mimétisme défensif et offensif chez l'Oiseau; **Masse, 857.**

Gegenseitige Hilfe in der Vogelwelt; **Wagemann, 1450.**

The relation of strength of stimulus to rate of learning in the chick; **Cole, 296.**

The voices of pigeons regarded as a means of social control; **Craig, 306:** The expressions of emotion in the pigeons; **Craig, 307, 308:** Oviposition induced by copulation in the pigeon; **Craig, 309.**

Some labyrinth habits of the Domestic Pigeon; **Hunter, 619.**

L'instinct du retour chez le Pigeon voyageur; **Hachet-Souplet, 505.**

The Psychology of the Anatidae; **Heinroth, 548.**

Ciconia alba, Wie entleert sich der junge Storch?; **Schuster, 1254.**

How the Vulture finds his carrion; **Reiser, 1126.**

Ein Fall von Wärmeempfindungs-Täuschung bei jungen Raubvögeln; **Biedermann-Imhoof, 128.**

Von dem geistigen Leben der Psittaciden; **Braun, 168.**

Life and behavior of the Cuckoos of Europe and the United States; **Herrick, 580.**

Sitta caesia beim Öffnen von Nüssen; **Eysell, 385.**

Selbstmord eines Eichelhäfers; **Bacmeister, 51.**

Colour and Moults.

Einfluss des Klimas auf die Färbung (Russ.); **Nesterov, 946.**

Changes of colour due to captivity; **Maillard, 841.**

On metallic colouring in birds; **Michelson, 907.**

The relative conspicuousness of barred and self-colored fowls; **Pearl, 1032.**

Colour variation in *Carpodacus frontalis* owing to introduction into the Hawaiian Isl.; **Grinnell, 473.**

Sexual coloration and moult in the California Linnet; **Grinnell, 480.**

Thayer's theory of revealing and concealing coloration discussed by **Roosevelt, 1158; Allen, 10; Barbour and Phillips, 87; and Thayer, 1364, 1365.**

Plumage changes in the Grouse; **Lovat, 797.**

Discussion on the partial summer plumage of the male Red Grouse; **Millais and Ogilvie-Grant, 908.**

Seasonal change of plumage in the Partridge and Ptarmigan; **Ogilvie-Grant, 991.**

Moult of *Larus ridibundus*; **Poncy, 1080, 1081.**

Male Black Grouse and Pheasants assuming female plumage; **Millais and Pycraft, 909.**

Female Pheasants assuming male plumage and males assuming female plumage; **Pycraft, 1091.**

Female Redstart (*Ruticilla phoenicurus*) assuming male plumage; **Nicoll, 957.**

Abnormal plumage in *Tetrao tetrix*; **Witherby and Ogilvie-Grant, 1514.**

Parasites and Pathology.

Parasiten der Vögel als Hinweis auf deren Phylogenie (Russ.); **Solovjev, 1305.**

The English Sparrow as an agent in the dissemination of chicken and bird mites; **Ewing, 383.**

Otistarda, Infektion mit *Taenia medio-canellata* (Russ.); **Mozgalevskij**, 927.

Un nouvel hôte de *Lynchia maura* Bigot; **Massonnat**, 858.

Infiziertsein der Vögel des Urals mit innern Parasiten (russ. u. franz.); **Clerc**, 288.

Cestoden von *Gallus domesticus*, *Fuligula cristata* (Russ.); **Solovjev**, 1306.

A new Cestod from an African Bustard, *Neotis capfra*; **Ransom**, 1101.

New species of avian Cestods in Australian birds; **Johnston**, 647.

Bird-cestods from the Aru Islands; **Fuhrmann**, 431.

Filarian parasites in birds from Tonkin; **Mathis & Léger**, 873.

Observations on the Protozoan parasites of the caeca of the fowl; **Martin & Robertson**, 850.

On the Trypanosome and other Protozoan blood-parasites of the Little Owl; **Minchin & Woodcock**, 916.

Experiments showing that the domestic fowl of Uganda cannot act as a reservoir of the virus of sleeping sickness; **Bruce**, 191.

Coccidia and Coccidiosis in birds; **Fantham**, 386.

Coccidiosis in British game-birds and poultry; **Fantham**, 387.

Pneumo-enteritis in Red Grouse caused by Coccidia in the air passages; **Fantham & Smith**, 388.

Woodpigeon Diphtheria, report for 1909-1910; **Ticehurst**, 1389.

The Haemogregarine parasites of South American birds; **Aragão**, 30.

The life history of *Spirochaeta gallinarum*; **Hindle**, 593.

Haematozoaires de *Hyphantornis melanocephala* du Haut-Sénégal et Niger; **Léger et Blanchard**, 761.

Sur des *Haemoproteus* de quelques oiseaux du Tonkin; **Mathis et Léger**, 876.

Leucocytozoon parasites in birds at Tonkin; **Mathis and Léger**, 874, 875.

Leucocytozoon in *Haliaetus vocifer*; **Laveran & Nattan-Larrier**, 754.

Leucocytozoon in birds from the Congo; **Aubert & Heckenroth**, 43.

Causes of deaths in the Zoological Gardens in London in 1910; **Plimmer**, 1066.

The diseases of the Grouse; **Lovat**, 797.

Zur Pathologie der Blinddärme des Huhns; **Bailer**, 54.

VARIATION AND AETIOLOGY.

5823

Variation.

White and other varieties of birds recently observed; **Aplin**, 29.

A discussion on albinism; **Ragués**, 1095.

Albino Hoopoe; **Brooke**, 182.

An abnormal variety of a British Robin described; **Hale**, 513.

Hahnenfedrigkeit eines Huhnes infolge Ovarialtumors (Russ.); **Skriabin**, 1296.

Teratology.

Das tératologique chez une Caille ordinaire; **Bonnet et Charrière**, 144.

Hydrocephaly in the fowl; **Klatt**, 691.

Vierbeiniges Truthahnküken (*Meleagris*) (Russ.); **Archipov**, 32.

Polymastica eines jungen *Passer domesticus* (Russ.); **Jaroslavcev**, 637.

Hühnerei mit wurmförmig beschuppter Spitze (Russ.); **Isakov**, 628.

Missbildungen und Fremdkörper in Hühnereiern; **Schiller-Tiez**, 1235.

Misbildung eines Hühnereies (Russ.); **Varsobin**, 1440.

A double hen's egg, its origin and explanation; **Patterson**, 1029.

Oeuf complet de poule inclus dans un autre oeuf complet; **Henneguy**, 564.

Abnormes Entenei (Russ.); **Skriabin**, 1294.

Sopra un pulcino mostruoso di 200 ore di sviluppo; **Lunghetti**, 806.

Hybrids.

On avian hybrids, with a list of recorded cases illustrated with five coloured plates; **Poll**, 1074.

The ovary and ova of hybrid ducks; **Poll, 1076**: Hybrid ducks and spermatogenesis; **Poll, 1075**.

On the activity of the ovaries in a Goldfinch × Canary hybrid; **Chappellier, 256**.

Atavism in guinea-chicken hybrids; **Guyer, 498**.

Brewster's Warbler, a natural hybrid; **Faxon, 393**.

Turdus merula mating with *T. musicus* in a feral state; **Adamson, 3**.

Saatgansblut bei Hausgänsen; **Christoleit, 265**.

Hybrid *Fringillidae*; **Rostkowski, 1170**; **Silver, 1286**.

Thaumalea obscura, the result of crossing *T. picta* ♂ with *T. amhersti* ♀; **Thomas, 1379**.

Natural hybridism between *Sula cyanops* and *S. leucogastra* in the Philippines; **Worcester, 1523**.

Notes on hybrids between *Tetrao tetrrix* × *Lagopus albus*; **Ušakov, 1433**: *Tetrao urogallus* × *Lyrurus tetrrix*. **Vallon, 1438**: *Phasianus* sp. × *Tetrao tetrrix*; **Schäff, 1225**: *Diardigallus diardi* × *Gemmaeus melanonotus*; **Martorelli, 853**: *Pavo cristatus* × *Numida* sp.; **Diaz, 331**: *Oreortyx pictus plumiferus* × *Lophortyx californicus*; **Peck, 1036**: *Columba palumbus* *C. livia domestica*; **Behm, 114**: *Streptopelia risoria* × *Turtur auritus*; *Tympanistria bicolor* × *Chalcopelia afra*; **L'Hermitte, 576**: *Grus canadensis* × *G. carunculata*; **Cosgrave, 301**: *Cygnus olor* × *Anser dom.*; **Gurney, 495**: *Anser albifrons* × *A. anser*, **Behm and Lönnberg, 116**: *Molpastes leucogenys* × *M. intermedius*; **Whistler, 1489**: *Fringilla coelebs* × Canary-bastard; **Schlusche, 1237**: *Fringilla montifringilla* × *F. coelebs*; **Bonhote, 137**: **Valloni, 1438**: **Silver, 1286**: *Carduelis elegans* × Canary; **Nalle, 936**: *Pyrrhula pyrrhula* × *P. cassinii*; **Johansen, 642**: *Dendroica auduboni* × *D. coronata*; **Taylor, 1356**: *Corvus cornix* × *C. corone*; **Simonsen, 1290**.

Heredity and Evolution.

Die Vorfahren der Vögel und ihre Lebensweise; **Abel, 2**.

Natural selection in the English Sparrow in America; **Harris, 527**.

On the cause of the fluctuations in growth of the fowls comb and its connection with egg-laying; **Smith, 1298**.

Another sex-limited character in fowls; **Sturtevant, 1338**.

Notes on two crosses between different races of pigeons; **Morgan, 924**.

Inheritance of fecundity in the domestic fowl; **Pearl, 1033**.

Further data regarding the sex-limited inheritance of the barred color pattern in poultry; **Pearl and Surface, 1034**.

Webfoot character in Pigeons and the Mendelian law; **Bonhote, 138**.

Experiments on the inheritance of colour and colour pattern in Pigeons and its relation to the Mendelian laws; **Bonhote and Smalley, 143**.

Experiments in the transmission of hyperdactyly in fowls; **Barfurth, 88, 89**.

Atavism in *Falco vespertinus*; **Chigi, 260**.

Extinct Birds.

Diluvial bird remains from Moravia; **Čapek, 232**.

Bird remains from the brown coal formation near Brůx, Bohemia; **Laube, 748**.

The Quarternary fossil birds of Portugal; **Harlé, 522**.

Bird remains from prehistoric sites in Norway; **Grieg, 469**, **Petersen, 1043**.

Die Raubvögel der Quedlinburger Kreidebucht und der angrenzenden Formationen; **Kalmus, 671**.

A synopsis of our knowledge concerning the fossil birds of the Pacific coast of North America; **Miller, 913**: Avifauna of the Pleistocene cave deposits of California; **Miller, 912**: A series of eagle tarsi from the Pleistocene beds of California; **Miller, 911**: Pleistocene avifauna of Fossil Lake, Oregon with description of *Aechmophorus lucasi* sp. n.; **Miller, 910**.

Distribution of the extinct Ratitae with diagnoses of the groups and a key to the species and a description of

a new genus and species of Ostrich (*Psammornis rothschildi*) by C. W. Andrews; **Rothschild, 1174.**

Alabamornis, a genus of fossil birds founded by Abel on two bones which really belong to a Zeuglodont skeleton, so that the genus must be deleted from list of fossil birds; **Lucas, 803.**

Fregilupus varius, remarks on an example at Caen; **Brazil, 166.**

The skeleton of *Palaeocorax moriorum*; **Pycraft, 1092.**

Ectopistes migratorius, the American Passenger Pigeon now extinct, reminiscences, reports and further information; **Allen, 9; Hodge, 594; Kalm, 690; Mackay, 817; Wright, 1526.**

GEOGRAPHY. 5827

General.

A series of maps illustrating the geographical distribution of bird families; **Clarke, 277.**

Past and present distribution of the *Ratitae*; **Rothschild, 1174.**

PALAEARCTIC REGION.

General.

Coloured plates of the birds of Europe; **Naumann, 937.**

Catalogue of the "Marmottan" collection of European birds in the Paris Museum; **Ménégaux, 897.**

Great Britain and Ireland.

BRITISH ISLES, the British Bird Book, a popular and illustrated account of the British Birds; **Kirkman, 688**: a guide to the haunts and habits of British Birds; **Westell, 1480**: The birds of the British Islands—vol. 5 completing the work; **Stonham, 1330.**

BRITISH ISLES, the distribution of the Nightingale during the breeding season; **Ticehurst and Jourdain, 1398.**

BRITISH ISLES, new British birds—*Numenius tenuirostris*; **Nicholl, 959** *Picus viridis pluvius* subsp. n. **Hartert, 537**; *Turdus torquatus alpestris*; **Nicholl, 958, 961**; *Acrocephalus dumetorum*; **Clarke, 279**; *Phylloscopus neglectus*;

Harvie-Brown, 541: *Lanius meridionalis*; **Nichols, 964**: *Anthus pennsylvanicus*; **Clarke, 278**: *Parus caeruleus caeruleus*; **Bonhote, 141.**

Kent, Nicoll, 959: *Ticehurst, 1391, 1393, 1395, 1396*: **Witherby, 1508.**

SUSSEX; bird notes round Hastings for 1910; **Bloomfield, 134**: Sooty Tern taken near Brighton; **Griffith, 471**: also **Ford-Lindsay, 414, 415**: **Nicoll, 958, 961**; **Nichols, 963, 964**: *Ticehurst, 1394, 1395, 1397*: **Witherby, 1508.**

SURREY; **Russell, 1191.**

HERTFORDSHIRE, bird notes for 1908 and 1909; **Bickerton, 126.**

HAMPSHIRE; *Ticehurst, 1395*: **Ticehurst and Witherby, 1392.**

BUCKINGHAMSHIRE, **Aplin, 26**: **Hollis 597, 598.**

CORNWALL, bird migration notes; **Clark, 275**: American birds straying to Cornwall; **Clark, 274**: also **Ticehurst, 1391.**

WORCESTERSHIRE; **Davies, 318.**

SHROPSHIRE, field notes from the Severn valley, 1905–1910; **Forrest, 421**: also **Forrest, 419.**

CHESHIRE, bird life in a suburban garden; **Siddall, 1283.**

STAFFORDSHIRE, bird notes around Stone; **Bladen, 131**: also **Masefield, 856.**

NORTHAMPTONSHIRE, ornithological report for 1910; **Cotton, 304.**

BEDFORDSHIRE; **Elliott, 377.**

SUFFOLK; *Ticehurst, 1388, 1391*: **Ticehurst and Witherby, 1392.**

NORFOLK, ornithological report for 1910; **Gurney, 495**: the Bittern breeding again; **Turner, 1423**: also **Gurney, 497**: **Ticehurst, 1391**: **Ticehurst and Witherby, 1392.**

LINCOLNSHIRE; **Wilson, 1501.**

YORKSHIRE; **Butterfield, 210**: **Fortune, 423**: **Greaves, 465**: **St. Quintin, 1192**: **Stephenson, 1317**: **Ticehurst and Witherby, 1392**: **Wade, 1449**: **Witherby, 1506**; **Witty, 1515.**

LANCASHIRE; the birds of the Oldham district; **Stubbs, 1337**: the birds of Walney Island; **Lumby, 804**: also **Williamson, 1498.**

CUMBERLAND, Natural History Record for 1910; **Thorpe** and **Hope**, 1384: Whooper swans visiting the river Eden in winter; **Hind**, 592.

NORTHUMBERLAND, on the birds of the southern part of the coast of the county; **Charlton**, 257: avifauna of the Tweed area; **Evans**, 380.

CARNARVONSHIRE; **Forrest**, 418: **Jones**, 657.

MONTGOMERYSHIRE; **Forrest**, 417.

GLAMORGAN, bird notes near Cardiff 1909-1910; **Proger** and **Paterson**, 1089.

SCOTLAND, report on ornithology in 1910; **Rintoul** and **Baxter**, 1143.

BERWICK, ROXBURGH, SELKIRK, avifauna of the Tweed area; **Evans**, 380.

DUMFRIES, KIRKCUDBRIGHT, and WIGTON, bird migration in the Solway area; **Service**, 1268.

DUMFRIESSHIRE, additions and corrections to the birds of Dumfriesshire; **Gladstone**, 456.

KIRKCUDBRIGHT; **Wilson**, 1501.

WIGTONSHIRE; **Kennedy**, 682.

AYRSHIRE, autumn and winter bird life at Fairlie; **Wilson**, 1502.

LANARK, RENFREW, and DUMBARTON, return of summer birds in the Clyde area in 1911; **Paterson**, 1026.

LANARKSHIRE, bird notes in Elder Park near Glasgow; **Rennie**, 1128: also **Stewart**, 1318.

RENFREWSHIRE, list of birds of eastern part; **Robertson**, 1149: also **Malloch**, 842: **Wilson**, 1501.

FIFE, bird notes on the Isle of May, autumn 1910; **Baxter** and **Rintoul**, 102: the Nightingale in the Isle of May, a new bird for the Scots avifauna; **Baxter**: and **Rintoul**, 103.

ARGYLLSHIRE, bird notes from Tiree; **Harvie-Brown**, 542: also **Cleave**, 282.

CAITHNESS; **Meiklejohn**, 891.

LEWIS, notes on the rockbuilding birds of the Butt of Lewis; **Clyne**, 291.

ORKNEY and SHETLAND, occurrence of *Locustella lanceolata*, new to Scotland; **Clarke**, 280: Fair Isle notes; **Clarke**, 279: Shetland notes; **Russell**, 1190: **Wilson**, 1503.

IRELAND, Beobachtungen auf einer ornithologischen Reise im Juni 1910; **Lindner**, 776.

IRELAND, the new Irish Coal-Tit and other distinct Irish forms; **Ogilvie-Grant**, 979: the Irish Jay described as a distinct subspecies; **Witherby** and **Hartert**, 1513: first record of *Sitta cacia*; **Williams**, 1497: also **Barrington**, 93: **Hart**, 529: **Nichols**, 962: **Ussher**, 1434.

Co. DOWN, a list of the birds of Hillsborough; **Foster**, 426.

Co. DONEGAL; **Campbell**, 230.

Co. MAYO Fulmar Petrel breeding in Mayo; **Ussher** and **Barrington**, 1435: also **Warren**, 1454, 1455.

GUERNSEY, ornithological report for 1910; **Rowswell**, 1185.

France.

FRANCE, list of rare birds observed in the south; **Chapel**, 244: also **Chapel**, 243: **Paris**, 1017.

AINSE, **Cottureau**, 303.

ARDENNES; **Groud**, 486.

AUBE, notes on the avifauna; **Paris**, 1016.

AVEYRON, catalogue of birds observed; **Delmas**, 328.

BOUCHES-DU-RHÔNE; **Chapel**, 245: **L'Hermitte**, 577.

CALVADOS; **Ternier**, 1358.

CHARENTE-INF.; **Anfrie**, 19.

CÔTES-DU-NORD; field notes from the island of Bréhat; **Hemery**, 563.

GARD; **Deleuil**, 327: **Hugnes**, 612, 613.

GIRONDE, excursions ornithologiques au bassin d'Arcachon et au lac de Cazaux; **Magaud d'Aubusson**, 833.

INDRE, les Rapaces diurnes et nocturnes; **Rollinat**, 1157.

LOIR-ET-CHARENTE; **Reboussin**, 1113.

NORD, *Chloris sinica* killed near Lille the first record for France, the second for Europe; **Vincent**, 1445.

PUY-DE-DÔME; **Poncius**, 1078.

SARTHE; **Lamoureux**, 742.

SEINE-INFÉRIEURE, avifauna of the district of Elbeuf; **Coulon**, 305.

SOMME, list of sea and shore birds observed; Magaud d'Aubusson, 829.

Germany.

PROV. HANNOVER, Studien zur Avifauna der Emslande; Detmers, 330: Tannenhäher im Harz; Rüdiger, 1187: auch Fritze, 430.

OLDENBURG, ornithologische Spaziergänge am Jadebusen; Thienemann, 1373.

PROV. WESTFALEN, ornithologische Beobachtungen im Sauerlande in den Jahren 1908 und 1909; Hennemann, 569: Ornithologische Mitteilungen über Hamm für 1910; Schmidt, 1241: auch Geyr von Schweppenburg, 450: Hennemann, 566, 567: Wemer, 1475.

RHEIN PROV.; Jordans und Kurella: 658.

PROV. HESSE-NASSAU, Die Brutvögel der Umgebung von Marburg a. L. Boxberger, 164: auch Boxberger, 159.

THURINGISCHE STAATEN; Mayhoff 880: Linder, 778: Fenk, 396.

KGR. SACHSEN, ornithologische Notizen von den Wernsdorfer Teichen 1909: 1910; Heyder, 590: ornithologische Erinnerungen an Naunhof; Krezschmar, 732: auch Heyder, 589: Wichtrich, 1492.

PROV. SACHSEN, Beobachtungen und Aufzeichnungen während des Jahres 1910; Hesse, 585: Brutnotizen 1910 aus dem unteren Bodetale; Hübner, 611: auch Büchner, 195: Lindner, 775: Schlüter, 1239, 1240.

MECKLENBURG; Grundlach, 488, 489.

LUBECK; Hagen, 508.

PROV. BRANDENBURG, zur Vogelfauna der Umgebung von Eberswalde. Rüdiger, 1186: die ständigen Brutvögel des Seengebietes; Stimming, 1319: Beobachtungen und Aufzeichnungen in 1910; Hesse, 585: die Vögel in Obstgarten; Eckstein, 365: auch Kleinschmidt, 697.

PROV. POMMERN; Vogel auf der Insel Hiddensee bei Rügen; Baltz, 70: auch Domeler, 346: Geyr von Schweppenburg, 451.

PROV. WESTPREUSSEN; Dobbrick, 336, 338: Kreckler, 729.

PROV. OSTPREUSSEN, X. Jahresbericht (1910) der Vogelwarte Rossitten; Thienemann, 1375: auch Geyr von Schweppenburg, 451: Kleinschmidt, 694: Tischler, 1400, 1401, 1402.

PROV. POSEN, Beobachtungen aus der Umgegend der Stadt Posen; Hammling, und Schulz, 517: zur Vogelfauna der Umgegend von Janowitz; Szulcowski, 1350: auch Dobbrick, 337, 339: Hammling, 515, 516: Kleinschmidt, 698.

PROV. SCHLESSEN, Vogelwelt der preussischen Oberlausitz; Stolz, 1325.

RHEINFALZ, ein Besuch der „Weideninsel Grün“ im Mai; Fischer, 409: also Zumstein, 1536.

BADEN, Henneman, 568.

Württemberg; Gebhardt, 440.

BAYERN, Vogelzüge und Vogelleben in der Bamberger Landschaft 1908 1910; Ries, 1138: ornithologische Beobachtungen 1909; Schnorr von Carolsfeld, 1246: Bericht über die Vogelmarkierungen im Jahre 1910; Stresemann, 1333: Beiträge zur Avifauna; Laubmann, 750: die Brutperiode der Iechvögel des Jahres 1910; Fischer, 401: Vorkommen von *Ciconia nigra*; Gengler, 445: auch Besserer, 122: Laubmann u. Heinroth, 746: Mayhoff, 881: Merk, 902, 903, 904: Ries, 1139: Schallow, 1226.

HELGOLAND, I., II. Jahresbericht der Vogelwarte der Kgl. Biologischen Anstalt 1910; Weigold, 1470: occurrence of *Emberiza spodocephala*, first record for Europe; Weigold, 1470, 1471.

NORD-FRIESISCHE INSELN, Bericht über die Brutergebnisse d. J. 1910 auf Jordsand Ellenbogen Norderoog und dem Langenwerder bei Poel; Dietrich, 333: die Vogelwelt und der Verein Jordsand; Dietrich, 332: der Lange Welder bei Poel; Hagen, 509.

OST-FRIESISCHE INSELN, Vogelleben auf der Insel Juist im Januar 1911; Arends, 33: Brutergebnis der Vogelkolonie Memmert von 1909-1910; Leege, 758.

NORD-SEE, Krabbentaucher an der deutschen Küste; Weigold, 1473.

Austria-Hungary.

TIROL, Bau, 101: Tratz, 1407, 1408.

SALZBURG, observations in the neighbourhood of Salzburg; Plaz, 1062.

ÖBERÖSTERREICH, ornithologische Beobachtungen vom Tannenhof (Hallein); **Tschusi zu Schmidhoffen, 1414**: auch **Angele, 20**; **Koller, 718**: **Tschusi zu Schmidhoffen, 1413, 1416**.

NIEDERÖSTERREICH, zum Vogelzug 1910; **Donner, 347**: Ornithologisches aus dem Waldviertel; **Donner, 348**.

BÖHMEN; **Angele, 20**.

MÄHREN; **Čapek, 231**.

DALMATIEN; **Marek, 848**.

UNGARN, bird protection 1909–11; **Csörgy, 312**: report on the spring migration of 1910, **Lambrecht, 741**; **Lovassy, 796**; **Szomjas, 1349**.

KROATIEN SLAVONIEN, the work of the Croatian Central Bureau of Ornithology; **Rössler, 1168**: Ornithological report for 1909, 1910 [Slavonic]; **Sajovic, 1194**: das Vogelleben im Sumpfe "Obedska bare" bei Kupinovo; **Rössler, 1167**: also **Barač, 85**; **Rössler, 1169**.

BOSNIA, n. subsp. *Caccabis* described; **Reichenow, 1118**.

Switzerland.

A catalogue of the birds of Switzerland, livr. 788; **Fatio and Studer, 390**: New subsp. of *Caccabis* described; **Reichenow, 1118**: Distribution de quelques oiseaux dans la région alpine; **Schaech, 1224**: The birds of the Weissenstein in the Jura; **Greppin, 466**: Avifaunal notes from the Birsig valley. Canton Baselland; **Fischer-Sigwart, 404**: An account of the birds of the Canton Aargau; **Fischer-Sigwart, 403**: Faunal notes from the Canton Thurgau; **Tanner, 1351**: Les Echassiers et Palmipèdes du Léman; **Poncy, 1085**: Field notes on the birds of the Toggenburg, Canton St. Gallen; **Hangartner, 518**: Ornithologische Notizen aus dem Wallis (Canton Vallais); **Hess, 583**: also **Côte, 302**; **Fischer-Sigwart, 402**; **Poncy, 1079, 1083**.

Holland.

Oologia Neerlandica; **Pelt-Lechner, 1037**: Report on the collection of indigenous birds Sept. 1910, Sept. 1911; **Oort, 1000**: Report on ornithological matters May 1909–April 1911; **Snouckaert van Schaumburg, 1300, 1302**: Winter- und Frühjahrs-Beobachtungen

in der Gegend von Roermond; **Hens, 572**: Avifauna of the environs of Roermond; **Hens, 573**.

Belgium.

Successful introduction of the Red Grouse into the Belgian Ardennes; **Somerville, 1309**.

Scandinavia.

DENMARK, report on birds observed at the lighthouses in 1910 (Danish); **Winge, 1504**: Reports from the ornithological stations for 1910; **Hagerup, 511**: The causes of the decrease of the raptorial birds (Danish); **Weismann, 1474**, **Weibüll, 1469**: Birds observed on the first of April in the grove Ærmelunden near Copenhagen (Danish); **Scholten, 1247**: Photographs of Danish Wading-birds; **Christensen, 263**.

NORWAY; **Grieg, 470**.

SWEDEN, des oiseaux subarctiques couvant au sud du territoire habituel; **Ekman, 374**: Ornithologische Beobachtungen aus Torne Lappmark; **Gyldenstolpe, 499**: Breeding habits of birds in the provinces of Jämtland and Lapland; **Sheldon, 1276**: Ornithologische Beobachtungen aus Jämtland; **Nicolin, 954, 955**: Birds of Gotland; **Hasselgren, 543**: Contributions to the avifauna of Gotland; **Nicolin, 953**: A flamingo shot in Gotland; **Johansson, 646**: also **Behm, 115**; **Montell and Berg, 922**; **Rosenius, 1162**.

SPITZBERGEN AND BEAR ISLAND, an account of the avifauna with 33 coloured plates; **Koenig and le Roi, 714**: Ornithological observations during the "Zeppelin Studienfahrt"; **Zedlitz, 1530**: Bird notes during two voyages in 1906 and 1910; **Mathey Dupraz, 872**: Studienreise nach dem Nordpolarmeer; **Munsterhjelm, 931**: also **Högbom, 595**; **Munsterhjelm, 930**.

ICELAND, new or rare birds in Iceland (Icelandic); **Sæmundsson, 1304**: Bird notes from Grimsey and northeast Iceland; **Bedford, 110**: also **Larsen, 746**; **Schiøler, 1233**.

Finland and Russia.

RUSSIA, avifauna of Russia vol. i; (Russ. and lat. Diagn.); **Bianchi, 125**: also **Kleinschmidt, 696**.

FINLAND, Ornithologische Tagebuchblätter von meiner Lapplandreise 1909; **Schulz, 1249**: also **Brenner, 175**; **Forsius, 422**; **Jarvi, 638**; **Levander, 771**, **772**; **Linnaniemi, 779**; **Luther, 807**; **Palmgren, 1015**; **Suomalainen, 1340**; **Wegelius, 1468**.

ESTLAND; **Ottow, 1010**.

LIVLAND; phänologische Beobachtungen an der Inseln Oesel; **Stoll, 1320**: criticism on Mierzejewsk's account of the birds of Oesel Isl.; **Stoll, 1323**: Ornithofauna der Südwestküste von Oesel; **Champenhhausen, 242**.

KURLAND, **Stoll, 1322**; **Stempel, 1316**.

POLEN; **Katin, 676**.

GOUV. KIEW, neue Beiträge zur Ornithofauna; **Artobolevskij, 37**.

GOUV. CHARKOW UND POLTAWA, zur Ornithofauna (Russ.); **Sarudny, 1208**: Donez-Gebiet, Ornithofauna (Russ.); **Averin, 45**.

GOUV. CHERSSON Ornithofauna (Russ.) **Pačoskij, 1011**: Enten der Dnjepr-Niederungen (Russ.); **Pačoskij, 1012, 1013**.

GOUV. EKATERINOSLAV, Ornithofauna (Russ.); **Walch, 1451**.

GOUV. TAURIEN, **Egorov, 368, 369**.

GOUV. SMOLENSK, **Grzibowski, 487**.

GOUV. PSKOW, Avifauna, **Sarudny, 1201, 1204**; **Ispolatov, 630**.

GOUV. MOSKAU, ornithologische Beobachtungen (Russ.); **Ogniev, 993**.

GOUV. TWER; **Kišenskij, 689**.

GOUV. WLADIMIR, zur Ornithofauna (Russ.); **Poliakov, 1071**.

GOUV. NOVGOROD; **Kooli-Volkonskij, 721, 722, 723**.

GOUV. VOLOGDA, Biologisches über die Vögel des Kreises Ustisysolisk (Russ.); **Andrejev, 14**.

GOUV. ARCHANGELSK, Beobachtungen über Vögel der Murman-Küste (Russ.); **Maurodiadi, 878**: Lebensgewohnheiten von *Somateria mollissima* auf den Solowetzki-Inseln (Russ.); **Tarnain, 1352**: zur Ornithofauna von Nova Zembla (Nowaja Semlja); **Molčanov, 921**.

GOUV. PERM, Ornithofauna des Nordens (Russ.); **Teplouchov, 1357**: Ornitho-

fauna von Pavdinskij Zavod (Russ.); **Chlěbnikov, 262**.

GOUV. SAMARA u. UFA; zur Ornithofauna der Kreise Buguruslan und Belebisk (Russ.); **Karamsin, 672**.

GOUV. SAMARA, Ornithofauna des Kreises Buguruslan (Russ.) **Ispolatov, 629**: also **Karamzin, 673**.

GOUV. SIMBIRSK (Russ.); **Žitkov, 1534**.

DON-GEbiet (Russ.); **Balabin, 64**.

KAUKASUS, Passeriformes des Kaukasus-Gebiets (Russ.); **Satunin, 1220**.

PROV. KUTAI, new subsp. *Poecile* **Nesterov, 945**: n. subsp. *Periparus*, **Nesterov, 942**: n. subsp. *Siphia* **Dombrowsky, 345**: bird notes from Batoum; **Saturnin, 1219**: Ornithofauna des Gebiets; **Nesterov, 941, 942, 943, 944**.

PROV. ELISAVETPOL; **Buturlin, 211**.

PROV. BAKU, n. subsp. *Buteo*, *Regulus*; **Loudon, 792, 793**: notes on the birds of Talysh on the south-west corner of the Caspian; **Loudon, 792**.

Portugal, Italy, the Balkan Peninsula and Mediterranean Islands.

PORTUGAL, systematic catalogue of the birds with vernacular names and distribution; **Seabra, 1265**.

ITALY, Atlante degli Uccelli italiani; **Baliani, 69**: n. subsp. *Picus* described; **Hartert, 357**: also **Picchi, 1058**; **Salvadori, 1198**.

LOMBARDY, Uccelli del Piacentino; **Ferragni, 398**.

VENETIA, Escursioni ornitologiche nel Friuli; **Vallon, 1439**: also **Arrigoni degli Oddi, 35**; **Ninni, 965**.

TUSCANY; **Balducci, 65**; **Beaux, 108**; **Picchi, 1055**.

PROV. ROMA, **Angelini, 21**.

ABRUZZI; materiali per una Avifauna; **Leone, 769**: Ricerche ornitologiche nel bacino del Salino; **Leone, 770**.

SICILY; **Salem, 1195**.

BALKAN PENINSULA; **Reiser, 1125**.

SERVIA; **Katerud, 675**.

ALBANIA, ornithological notes; **Klapotocz, 690**.

ROMANIA, general account of the avifauna, systematic, biologic and geographical; **Dombrowski, 344**: n. subsp. *Emberiza* described; **Gengler, 446**.

CONSTANTINOPLE PROV. Über die Nistplätze einiger Konstantinopeler Stadtvögel; **Braun, 172**,

CORSICA, an annotated systematic list of the avifauna; **Jourdain, 659, 662**; Beiträge zur Ornithologie; **Parrot, 1021, 1023**: n. subsp. *Dendrocopus* **Hartert, 538**: n. subsp. *Turdus, Chloris*; **Tschusi, 1412, 1415**: n. subsp. *Turdus*, **Schiebel, 1232**.

ELBA and the TUSCAN ARCHIPELAGO: account of the avifauna; **Arrigoni degli Oddi, 36**.

SARDINIA, **Beaux, 107**.

CYPRUS, further contribution to the ornithology of Cyprus; **Bucknill, 196**.

MEDITERRANEAN SEA, birds notes on a voyage to Alexandria; **Ticehurst, 1386**.

Western Asia.

ASIA MINOR, avifauna of the north-east corner; (Russ.) **Nesterov, 941**.

SYRIA AND PALESTINE, a popular account of the birds of the Bible; **Stretton-Porter, 1332**: Oologische Tagebuchnotizen **Schmitz, 1243, 1244**: n. subsp. *Apus*; **Bangs 78**: n. subsp. *Prinia*; **Zedlitz, 1528**: also **Aharoni, 5**: **Schmitz, 1242**.

PERSIA, Verzeichniß der Vögel Persiens; **Sarudny, 1210**: n. sp. *Gecinus Periparus, Aerocephalus Agrobates Porphyrio* described; **Sarudny, 1210**: n. sp. *Apus Sarudny, 1206: n. sp. *Periparus*; **Sarudny and Bilikevič, 1214**: also **Sarudny, 1209**: **Steinhoff, 1315**.*

BELUCHISTAN, **Marshall, 849**.

North Africa.

EGYPT, Oiseaux de l'Afrique tropicale représentés sur les monuments; **Boussac, 150, 151**: n. sp. *Passer* described; **Madarász, 820**: *Sylvia melanothorax* and *Regulus regulus* new to the avifauna; **Nicoll, 956**: also **Nicoll, 960**.

TRIPOLI, n. sp. *Ammomanes* described; **Hartert, 533**.

ALGERIA and TUNIS, notes on birds observed; **Newman, 950**: Oiseaux du Sahara et du plateau steppien; **Joly, (N-9186 g)**

654: stray bird notes; **Meade-Waldo, 883**: n. subsp. *Emberiza* described; **le Roi, 1155**: also **Charrière, 258, 259**: **Hartert and Kleinschmidt, 540**.

Central and Northern Asia.

SIBERIA; list of birds found also in Australia; **Buturlin, 227**: n. subsp. *Picus*; **Hesse, 586**: also **Thayer, 1366**.

GOUV. TOBOLSK, **Ušakov, 1430**.

GOUV. TOMSK, Ein ornithologischer Ausflug an den See Tschany **Johansen, 642**: also **Johansen, 643, 645**: **Ušakov, 1431**.

PROV. AKMOLINSK; zur Ornithofauna des Gebiets Akmolinsk (Russ.) ; **Awerin, 46**: also **Johansen, 644**.

PROV. SEMIPALATINSK, subsp. n. *Budytes, Passer* described; **Poliakov, 1072, 1070**.

GOUV. TURKESTAN, Ornithofauna (Russ.) ; **Sarudny, 1202**: n. spp. *Syrnium, Apus, Cynchramus*; **Sarudny, 1211, 1206, 1212**: n. subsp. *Tschitrea* **Sarudny u Härms**; **1215**: n. subsp. *Lanius*; **Buturlin, 215**: also **Buturlin, 212**; **Zubow, 1535**: **Sarudny, 1207**.

TRASCASPISCHE PROV.; Ornithofauna des aralo-kaspischen Steppengebiets. (Russ.) ; **Bostandžoglo, 148**: bird notes of a journey in 1908; **Loudon, 792**: subsp. n. *Chloris* described; **Sarudny, 1209**: also **Loudon, 794**.

BUCHARA KHANATE, n. subsp. *Tetraogallus, Ammoperdix* described; **Sarudny, 1202, 1213**: n. sp. *Carduelis Kollibay, 719*.

HIMALAYAS, n. sp. *Syrnium*; **Sarudny, 1211**.

TIBET, bird notes from Gyantse and the Chumbi valley; **Bailey, 55**: n. sp. *Melanocorypha* described; **Reichenow, 1118**.

JENISSEISK; Ornithofauna (Russ.) ; **Tugarinov u. Buturlin, 1420**: zur Verbreitung einiger Vögel, **Buturlin, 218**: Nord-Jenissei-Taiga, Ornithofauna (Russ.) **Jablonskij, 632**: n. spp. *Cyanistes, Coccothraustes* described; **Tugarinov u. Buturlin, 1420**: n. subsp. *Bubo, Larus* described; **Buturlin, 213, 216**: also **Federov, 394**.

PROV. TRANSBAIKALIEN; **Bamberg, 71**.

AMUR PROV; **Buturlin, 214, 223, 226**.

USSURI PROV.; Buturlin, 219 : Medvědev, 890 : Sarudny, 1203.

KÜSTEN-PROV. ; Buturlin, 223.

Eastern Palaearctic Asia.

SACHALIN, Buturlin, 223.

JAPAN ; Uchida, 1428.

BONIN ISL. ; birds of Sulphur Island (Japanese) ; Uchida, 1429 : n. sp. *Porzana* ; Ingram, 623.

CHINA, notes on birds observed near Wei Hai Wei ; Jones, 655 : n. sp. *Dryonastes*, described ; Riley, 1141.

Atlantic Islands.

MADEIRA, new sp. *Puffinus* described ; Rothschild and Hartert, 1176.

CANARY ISLES, n. sp. *Dendrocopus* described ; le Roi, 1156 : also Bannerman, 81.

ETHIOPIAN REGION.

West Africa.

PORTUGUESE GUINEA, n. spp. *Turdus*, *Cisticola* described ; Reichenow, 1117, 1119.

SIERRA LEONE, n. sp. *Cinnyris* described ; Bannerman, 83.

LIBERIA, n. sp. *Sylviella* described ; Bannerman, 83.

KAMERUN, die ornithologischen Sammlungen der Zoologisch-Botanischen Kamerun-Expedition 1908 und 1909 ; Reichenow, 1117 : n. spp. *Turdus*, *Tricholaema*, *Chaetura* described ; Reichenow, 1117, 1120, 1121 : further field notes on birds observed and description of nests and eggs ; Bates, 98 : n. sp. *Glaucidium*, *Diaphorophyria* described ; Bates, 99.

ANGOLA, n. sp. *Dryoscopus* described ; Slater, 1263 : n. sp. *Camaroptera* ; Zedlitz, 1521.

BELGIAN CONGO, sp. n. *Motacilla*, *Laniarius* ; Ogilvie-Grant, 990 : sp. n. *Numida*, *Tchitrea* ; Reichenow, 1120 : sp. n. *Columba* ; Sassi, 1218 : sp. n. *Dendromus*, *Cinnyris*, *Zosterops* ; Dubois, 356 : sp. n. *Ploceus*, *Malacotus* ; Hartert, 534, 535 : also Hellmayr, 552.

FRENCH CONGO, n. sp. *Sylviella* described ; O. Grant 987.

South Africa.

SOUTH AFRICA, n. spp. *Certhilauda*, *Phyllastrephus*, *Zosterops*, *Camaroptera*, *Apalis*, *Monticola*, *Vinago*, *Falco*, *Pisorhina*, *Glaucidium*, *Dendromus*, *Irrisor*, *Alseonax*, described and new records of other African birds and of European migrants ; Gunning and Roberts, 491 : List of birds collected by Claude Grant in various parts of South Africa with descriptions of n. sp. *Cossypha*, *Pratincola* ; Slater, 1260.

CAPE COLONY, field notes from East London ; Wood, 1518 : Notes on the birds of the district of Matatiele ; Davies, 317.

NATAL ; Chubb, 269, 270.

TRANSVAAL, notes on a few birds from Wakkerstroom ; Roberts, 1147.

S. RHODESIA, on some nests and eggs from Mt. Chirinda ; Swynnerton, 1345.

PORTUGUESE EAST AFRICA, field notes on a collection of birds in the Transvaal Museum from Boror ; Roberts, 1148.

Central and East Africa.

Birds of the lake regions of Central Africa, with description of a new subspecies of *Pycnonotus* ; Reichenow, 1116.

BT. E. AFR., UGANDA AND EGYPTIAN SOUDAN, annotated list of birds collected ; Berger, 117.

DEUTSCH-OSTAFRIKA, an account of the birds of the Kilimanjaro neighbourhood, with a discussion of their ecological and geographical relations ; Sjöstedt, 1293 : Zoologische Ergebnisse der Expedition des Herrn Hauptmann a. D. Fromm 1908/09 ; Kothe, 724 : n. spp. *Estrilda*, *Pyrenestes*, *Serinus*, *Numida* described ; Kothe, 726, 725 : n. sp. *Batis*, *Uraeginthus*, *Macrosphenus*, *Camaroptera*, *Sylviella* ; Grote, 485 : n. sp. *Glaucidium* ; Neumann, 948 : n. sp. *Mirafra*, *Batis*, *Phyllastrephus*, *Caprimulgus* ; Sjöstedt, 1293 : n. sp. *Riparia* ; Madarasz, 823 : n. sp. *Sarothruva* ; Madarasz u. Neumann, 825 : n. sp. *Ortygospiza*, *Camaroptera* ; Zedlitz, 1528, 1521 : also Schuster, 1251, 1252 ; Boxberger, 160.

BRITISH EAST AFRICA AND UGANDA, an account of the Game birds ; Jackson, 633 : n. sp. *Pternistes*, *Francolinus*, *Ptilopachus*, *Turnix*, *Xanthophilus*, *Uraeginthus*, *Pycnonotus*, *Pogonocichla*,

Eminia, *Sylvieta*, *Helionympha*, *Cisticola* described; **Mearns, 887, 888, 889**: n. sp. *Numida*, *Alseonax* described; **Lönnberg, 787**: n. sp. *Tarsiger*; **O.-Grant, 981**: n. sp. *Laniarius*; **Reichenow, 1118**: n. sp. *Eremomela*; **Clarke, 276**: also **Somerén, 1308**; **Percival, 1040**.

BRITISH EAST AFRICA, annotated list of birds collected on a journey from Nairobi to Guaso Nyiri, with descriptions of new species and a discussion of the ecological and geographical relations of the avifauna; **Lönnberg, 787**.

UGANDA, photographic studies of bird life; **Somerén and Somerén, 1307**: random bird notes; **Seth-Smith, 1275**: n. sp. *Uracinthus*; **Zedlitz, 1528**.

North-East Africa and Arabia.

ERITREA AND NORTH ABYSSINIA, meine ornithologische Ausbeute; **Zedlitz, 1528**.

ABYSSINIA, n. sp. *Bradyornis*, *Ortygops*, *Eremomela*, *Anomalospiza* described; **Bannerman, 82, 84**: n. sp. *Coracias*; **Madarasz, 826**: n. sp. *Camaroptera*; **1521**.

ERITREA, n. sp. *Passer* described; **Zedlitz, 1528**.

EGYPTIAN SOUDAN, an ornithological excursion up the White Nile with lists of birds obtained and observed and description of a new species of *Centropus* by Neumann; **Koenig, 715**: Finches and Weaver birds injurious to grain crops; **Butler, 209**: n. sp. *Passer*, *Cisticola*, *Upupa* described; **Madarasz, 820**.

ARABIA; **Oort, 998**.

Madagascar and Mascarene Islands.

MAURITIUS and BOURBON, the insectivorous birds; **Manders, 843**.

MAURITIUS; **Carrié, 235**.

INDIAN REGION.

Indian Empire and Ceylon.

INDIA, BURMA AND CEYLON, account of the Game birds, Pts. 3-5; **Baker, 61**.

KASHMIR; **Mitchell, 917**.

N.-W. FRONTIER PROV.; **Fooks, 410**: **Home, 599**; **Wignall, 1494**.

(N-9186 g)

PUNJAB; **Baker, 63**: **Dodsworth, 343**: **Whistler, 1488, 1489**.

BOMBAY; **Mosse, 926**: **Simonds, 1289**.

MADRAS; **Baker, 62**.

CENTRAL INDIA, bird notes from Sehore, Bhopal State; **Whitehead, 1487**.

CENTRAL PROV., bird notes from the Saugor and Damoh districts; **King, 686**.

UNITED PROVINCES, birds nesting in the Nila valley, Garhwal; **Whymper, 1491**: **Osmaston, 1009**; **Plimston, 1067**: **Fulton, 432**.

BENGAL; **Primrose, 1088**.

CEYLON, the insectivorous birds; **Manders, 843**: **Kleinvoegelleben, Gehlsen, 441**: n. spp. *Corone*, *Apus*, *Zosterops*; **Madarasz, 822**.

BURMA, bird notes from Maymyo in the Shan hills; **Harington, 521**; also **Cook, 297**.

ANDAMAN ISL. n. sp. *Polionetta* descr.; **Fleming, 405**.

Malay Peninsula and East India Islands.

INDO-MALAYAN REGION, n. spp. *Picidae*; **Hesse, 586**: n. spp. *Hypothymis*; **Oberholser, 977**.

MALAY PENINSULA, notes on birds new to or rare in the Peninsula; **Kloss, 710**: list of birds obtained in the Trengganu district; **Kloss, 707**: list of birds from the lowlands of Pahang; **Kloss, 708**: list of birds collected in the hills of Negri Sembilan; **Kloss, 709**: list of birds collected chiefly in Trang and the northern portion of the region; **Robinson & Kloss, 1152**: list of birds from the mountains of Ulu Langat, Selangor; **Robinson, 1150**: n. sp. *Bubo* described; **Robinson, 1151**.

SUMATRA, n. sp. *Gecinus* described and other rare birds noticed; **Oort, 1004**.

JAVA, collection of birds from Mount Tenggler; **Oort, 1001**: additions and corrections to Dr. van Oort's list of birds from Western Java; **Jacobson, 636**: n. sp. *Crocopsis* described; **Oort, 1001**: also **Oort, 998**.

South China and Indo-China.

SOUTH CHINA; **Kershaw, 683**.

COCHINCHINA, notes on the *Ploceidae*; **Germain, 448**.

FORMOSA; sp. n. *Sitta* (Russ.); Buturlin, 224.

HAINAN, n. sp. *Dendrocopus*; Hartert & Hesse, 539.

PHILIPPINE ISLANDS, über die Herkunft der holarktischen Vogelfauna auf den Philippinen und Sundainseln; Eckardt, 363: on a collection of birds from northern Negros; McGregor, 814: newly discovered breeding places for sea-birds; Worcester, 1523: n. sp. *Porzana*; Ingram, 623: n. sp. *Micranous*; McGregor, 815.

AUSTRALIAN REGION.

New Guinea and dependent Islands.

SERMATTA NEAR TIMOR, a list of birds obtained; Hartert, 530.

BABBER AND LUANG NEAR TIMOR, additions to avifauna; Hartert, 532.

CERAM, n. sp. *Rhipidura*, *Myzomela Stoparola*, *Callocalia*, *Zosterops*; Oort, 1004: n. sp. *Columba*; Ogilvie-Grant, 986.

GORAM, n. sp. *Piezorhynchus*; O.-Grant, 986.

ARU ISLANDS, die Vögel mit besonderer Berücksichtigung der Sammlungen des Herrn Dr. H. Merton; n. sp. *Halcyon* descr.; Berlepsch, 120: n. sp. *Sericornis* descr.; O.-Grant, 989: n. sp. *Melilestes* descr.; Rothschild & Hartert, 1177.

DUTCH NEW GUINEA, remarks on the bird-life; Goodfellow, 461: rare birds noted; O.-Grant, 985: n. spp. *Cyclopsittacus*, *Aprosnectus*, *Calornis*, *Ptilotis*, *Pachycephala*, *Myiagra*, *Rhipidura*, *Casuaris* descr.; O.-Grant, 983, 984, 988: n. sp. *Nasiterna*, *Charmosynopsis*, *Pachycephalus* descr.; Rothschild, 1172, 1173; n. sp. *Ptilotis*, *Melipotes*, *Melirrhophetes*, *Androphilus*, *Pristorhamphus*; Rothschild & Hartert, 1178, 1180: n. sp. *Paradigalla*, *Falcinellus*, *Cyclopsitta*, *Charmosyna*, *Eupetes*, *Pachycare*; Rothschild & Hartert, 1181, 1182: n. sp. *Microglossus*, *Eudynamis*; Oort, 999, 1002.

BRITISH NEW GUINEA, n. sp. *Munia* descr.; Hartert, 533; n. sp. *Pristorhamphus*; Rothschild & Hartert, 1180: n. sp. *Sericornis*; O.-Grant, 989.

GERMAN NEW GUINEA, n. spp. *Aprosnectus*, *Melanorhactes* descr.; Reichenow, 1120, 1122: n. spp. *Melirrhophetes*, *Melipotes*, *Pachycephala*; Rothschild & Hartert, 1175, 1183: n. sp. *Seleucides*; Schlüter, 1238.

NEW BRITAIN; Hartert, 531.

Australia.

AUSTRALIA, the birds with coloured illustrations vol 1 pts. 2-5; Mathews, 859: the birds of Australia, a handbook; Lucas & Le Souëf, 802: a pocket handbook on the birds of Australia; Leach, 755: nests and eggs of the breeding birds; North, 968: the distribution of Australian land birds; Hall, 514: list of birds found also in Siberia; Buturlin, 227.

WEST AUSTRALIA, field notes in the Stirling ranges; Whitlock, 1490: field notes from Broome hill; Carter, 237: field notes near Kimberley; Hill, 591: n. sp. *Erythroriorchis* descr.; Campbell, 228: n. sp. *Cinclorhamphus*; Iredale, 626: n. sp. *Ptilotis* Milligan, 915: n. sp. *Gerygone*, *Amyntornis*, *Poëphila*, *Pomatostomus*, *Meliornis*, *Artamus*, *Butorides*; Mathews, 861, 862, 864, 865, 866, 867.

SOUTH AUSTRALIA, birds on Yorke Peninsula; White, 1486: n. spp. *Ephthiamura* descr.; Ashby, 39: *Aphelocephala*; Mathews, 863: also Eylmann, 384: Mellor, 892.

NORTHERN TERRITORY, n. sp. *Rhipidura* descr.; Ashby, 38.

TASMANIA, Honey-eaters of the Cleveland district; Fletcher, 406: Birds of Tunnel district; Thompson, 1380: n. sp. *Coracina*; Mathews, 867: also Dove, 349: M'Gowan, 813.

VICTORIA, field notes from the Bass valley; Nicholls, 952: field notes along the Wimmera river; Sullivan, 1339: n. sp. *Myzantha*; Wilson, 1500: *Diaphorillas*; Mathews, 867: also Dove, 349, 350: Ross, 1164.

NEW SOUTH WALES, notes on the avifauna of the islands off the coast; Hull, 616: n. sp. *Puffinus* descr.; Hull, 615: *Rhipidura*, *Acanthiza*; Mathews, 865, 866: also Jackson, 634.

QUEENSLAND, field notes about Terrors creek, near Brisbane; Weatherill, 1467: field notes from the Cape York district;

Barnard, 91: bird-notes on an island on the great Barrier Reef; **Banfield, 73:** n. sp. *Halcyon* descr.; **Campbell, 229:** *Dacelo*; **North, 970:** *Alisterus*, *Ninox*, *Piezorhynchus*; **Mathews, 861, 863, 867:** also **White, 1483, 1484.**

New Zealand and dependencies.

NEW ZEALAND, notes on the migratory birds; **Reid, 1124:** field notes on birds of the bush of the North Island; **M'Lean, 818:** song of the native birds; **Andersen, 12:** also **Brasil, 166:** **Meyer, 905.**

LORD HOWE and NORFOLK ISLS., additional notes chiefly bibliographical: **Iredale, 627:** description of a new species of *Oestrelata*; **Hull, 614.**

CHATHAM ISLAND, n. sp. *Rhipidura* described; **Bangs, 76.**

AUCKLAND ISLAND, n. sp. *Anthornis* described; **Bangs, 74.**

Pacific Islands.

On the distribution of the *Megapodidae* in the Pacific; **Lister, 781, 782.**

FIJI ISLANDS, remarks on the avifauna; **Bahr, 52:** on some Fijian birds in captivity; **Bahr, 53.**

HAWAIIAN ISLANDS, n. sp. *Vestiaria*, *Psittinostra* described; **Bangs, 75:** also **Grinnell, 473.**

NEOTROPICAL REGION.

General.

The birds of North and middle America Pt. 5; **Ridgway, 1135.** See also **Ridgway 1136, Oberholser 974, 975.**

South America.

SOUTH AMERICA, n. sp. *Rupornis*, *Penelope*, *Antrostomus*, *Thamnophilus*, *Pyrocephalus*, *Leistes*; **Bangs, 77:** n. spp. *Philydor*, *Pittasoma*; **Hellmayr, 557:** n. spp. *Dryobates*; **Oberholser, 974:** *Picidae*; **Ridgway, 1136:** 2 new genera and 18 new species and subspecies *Tanagridae*; **Berlepsch, 119.**

ARGENTINA, PARAGUAY, BOLIVIA and southern BRAZIL, list of birds collected with field notes; **Grant, 463.**

PATAGONIA, n. sp. *Thelassogeron*; **Salvadori, 1196.**

ARGENTINE REPUBLIC; **Dabbene, 315:** **Beauquesne, 106.**

CHILE, first section of a work on the birds; **Porter, 1087:** n. sp. *Upucerthia*; **Chubb, 268.**

BOLIVIA, n. sp. *Thamnomanes* descr.; **Hellmayr, 555.**

PERU, on a collection of birds made by M. Baer; **Ménégaux, 895, 900:** n. sp. *Arremon* descr.; **Hellmayr, 550.**

BRAZIL, n. sp. *Siptornis*, *Phaethornis*; **Hellmayr, 556, 554:** n. sp. *Phaethornis*; **Madarasz, 823:** *Malacoptila*; **Sassi, 1217.**

ECUADOR, the geographical relations of its avifauna with neighbouring countries discussed; **Ménégaux, 893:** catalogue of the Trochilidae; **Simon, 1287:** n. sp. *Chrysura*; **Madarasz, 824:** n. sp. *Thinozorys*; **Salvadori & Festa, 1199:** n. sp. *Trochilidae*; **Simon, 1287.**

BRITISH GUIANA, field and avicultural notes; **Dawson, 321:** n. spp. *Neopipo*, *Rhynchocyclus* descr.; **McConnell, 810.**

VENEZUELA, n. sp. *Buarremon*, *Colaptes* descr.; **Hellmayr, 555.**

COLUMBIA, account of a collection made by M. G. Palmer for the Munich Museum in the Prov. Chocho; **Hellmayr, 550:** n. sp. *Myrmotherula*, *Phaethornis*, *Euphonia*; **Hellmayr, 550 554 555:** n. sp. *Eriocnemis*; **Simon, 1288.**

Central America.

PANAMA, n. sp. *Ceryle*; **Goldman, 460:** *Golmania* (*Trochilidae*), *Hylomanes*, *Pachysylvia*; **Nelson, 938, 939.**

COSTA RICA, n. sp. *Calospiza*; **Hellmayr, 550.**

West Indies.

ST. LUCIA, A list of the birds and remarks on their legislative protection; **Clark, 272:** n. sp. *Gallinula* descr.; **Bangs, 80.**

GRENADA, n. sp. *Hybris*, *Planesticus*, *Empidonax* described; **Barbour, 86.**

CAYMAN ISLANDS, a list of the birds with discussion of their origin; **Lowe, 798.**

CUBA, catalogue of the birds in the Havana Museum; **Ragués, 1094:** also **Ramsden, 1096, 1097, 1098, 1100.**

BAHAMA ISL., account of a collection made in 1908-9 by Worthington and a discussion of the affinities of the avifauna; **Todd & Worthington, 1405**; also **Todd, 1403**.

NEARCTIC REGION (including Mexico).

General.

The birds of North and Middle America, Pt. 5; **Ridgway, 1135**.

New species of *Dryobates* described; **Oberholser, 974, 975**: new species of *Picidae*; **Ridgway, 1136**.

Mexico.

MEXICO, a descriptive catalogue of the birds; **Herera, 578**: a year's collecting in the state of Tamaulipas; **Phillips, 1049**: n. sp. *Icterus*; **Chapman, 251**: *Strix*, *Heleodytes*, *Dendroica*; **Phillips, 1049**; *Uranometra*; **Simon, 1288**.

LOWER CALIFORNIA, **Osburn, 1007**: **Thayer, 1370**.

Western United States.

CALIFORNIA, an April day list of Calaveras valley birds; **Carriger and Ray, 236**: field notes from the San Joaquin valley; **Grinnell, 477**: some birds of the San Quentin bay region; **Howell, 606**: winter birds in Trinity and Shasta counties; **Kellogg, 677**: notes from Ventura county; **Peyton, 1045**: some August notes for Lake Tahoe; **Ray, 1107**: field notes from the south-central districts; **Swarth, 1343**: swallow notes from Fresno county; **Tyler, 1427**: winter birds of the Salton sea region; **Van Rossem, 1165**: May notes from San Jacinto lake; **Willett and Jay, 1496**: an early spring trip to Anacapa Island; **Burt, 204**: additional bird-notes from the Farallones; **Dawson, 323**: notes on two birds from Santa Catalina Island; **Osburn, 1008**: further notes from Santa Cruz Island; **Howell and Van Rossem, 607**: distribution of the Mockingbird (*Mimus polyglottos leucopterus*); **Grinnell, 472**: first record for *Sciurus airocapillus* and *Dendroica virens*; **Dawson, 322**: *Icterus icterus*, in California; **Bowles, 158**: Birds in relation to the fruit industry; **Beal, 104**: new subspecies of *Melospiza*; **Grinnell, 474**, and **Oberholser, 976**, of *Guiraca*; **Grinnell, 476**.

CALIFORNIA, minor notices:—**Bowles, 155, 156**; **Grinnell, 478, 479**; **Jay, 639**; **Lamb, 740**; **Linton, 780**; **Myers, 935**; **Ray, 1108**; **Shelton, 1277**; **Tyler, 1426**.

ARIZONA, notes from Sacaton; **Gilman, 454**: doves on the Pima reservation; **Gilman, 455**: also **Brown, 186**.

NEW MEXICO; **Bailey, 56**.

COLORADO, notes from Boulder Co.; **Betts, 124**: Bobolink (*Dolichonyx oryzivorus*) at an altitude of 10,150 ft.; **Hersey, 581**: nesting notes on the ducks of the Barr lake region; **Rockwell, 1154**: some notes on *Bubo virginianus pallescens*; **Warren, 1453**: list of birds observed in Estes Park; **Widmann, 1493**: also **Bergtold, 118**; **Hersey, 582**; **Rockwell, 1153**.

NEVADA, new subsp. of *Pipilo* described; **Grinnell, 475**.

OREGON, summer birds of Willow creek valley, Malheur county; **Peck, 1035**: also **Anthony, 23**.

WASHINGTON, notes on birds of Seattle; **Rathbun, 1106**: also **Bowles, 155**; **Kennedy, 681**; **Rathbun, 1105**.

MONTANA, a preliminary list of the birds of Gallatin county; **Saunders, 1221**.

IDAHO; **Moody, 923**; **Wyman, 1527**.

WYOMING; **Peabody, 1030**.

Middle United States.

TEXAS, the oasis of the Llano; **Bailey, 57**: the birds of Kerrville and vicinity; **Lacey, 738**: a new subspecies of *Passerina* described; **Mearns, 885**.

LOUISIANA; **Brown, 189**.

ARKANSAS, an account of the birds with life zones and economic relations; **Howell, 608**.

MISSOURI; **Baldwin, 66**; **George, 447**.

KANSAS; **Evans, 381**.

SOUTH DAKOTA, My avian visitors; **Tullsen, 1421**: annotated list of the birds of Harding county; **Visher, 1446**.

MINNESOTA, notes on some summer and fall birds of the Crooked lake region, Cass and Crow Wing counties; **Honywill, 600**.

IOWA; **Albee, 7**.

WISCONSIN; **Coale, 294**.

ILLINOIS, notes on the birds of Addison; Eifrig, 372: summer bird life in the vicinity of Havana; Gates, 438: also Abbot, 1: Coale, 293: Du Bois, 253: Smith, 1297.

MICHIGAN, a biological survey of the sand dune region on the south shore of Saginaw bay; Wood and Gaige, 1522: observations on the spring migration (1910) at Ann Arbor; Tinker, 1399: the results of the Mershon expedition to the Charity islands, Lake Huron; Wood, 1521: the warblers in Wayne county in 1909; Wood, 1519: also Taverner, 1353: Wood, 1520.

OHIO, some notes from Pickaway county; Bales, 67: the birds of Drake county; Maccloughney, 811: also Bales, 68: Fordyce, 416: Jones, 656; Todd, 1404.

Eastern United States.

FLORIDA, notes on Pelican Island; Nelson, 940.

GEORGIA; Hoxie, 609, 610: Rossignol, 1166.

SOUTH CAROLINA, annotated list of birds of the State; Wayne, 1466: supplement to the "birds of the Coast region"; Weston, 1481: local bird notes at Charleston; Sass and others, 1216: also Chamberlain, 241: Chisholm, 261: Rea, 1109, 1110: Wayne, 1457, 1459, 1460, 1461, 1462, 1463, 1464.

NORTH CAROLINA, peculiarities in the distribution of some of the birds; Sherman, 1279: also Brimley, 180: Pennock, 1039.

VIRGINIA; Bailey, 59: Howell, 605.

PENNSYLVANIA; Dillin, 334: Harlow, 523, 524, 525, 526, 528: Miller, 914.

DELAWARE; Pennock, 1038.

NEW JERSEY; Bowdish, 153: Kohler, 716, 717.

NEW YORK; Bowdish, 154: Burtch, 205, 206: Chapin, 248, 249, 250: Cleaves, 283, 286: Davis, 320: Elliott, 375: Thurston, 1385.

CONNECTICUT; Saunders, 1222.

RHODE ISLAND; a list of the nesting birds; Rhode Island Commissioners, 1131: also Murphy, 933, 934: Mackay, 816.

MASSACHUSETTS, report of the State Ornithologist for the year 1910; Forbush, 411: also Barrett, 92: Carr, 234: Chapin, 247: Cobb, 295: Cook, 298: Farley, 389: Fay, 391, 392: Kloseman, 706: Mackay, 816: Peters, 1041: Phillips, 1050, 1051, 1052: Sherman, 1280: Thayer, 1367, 1368, 1369: Wright, 1524, 1525.

NEW HAMPSHIRE; Storrs, 1331.

MAINE, bird life on the Machias Seal islands; Brown, 185: also Brewer, 177: Brown, 184, 187, 188: Clark, 273: Hardy, 520: Knight, 712: Lewis, 773: Norton, 971, 972, 973: Rich, 1134: Russell, 1189: Stanwood, 1311, 1312, 1313: Walker, 1452.

Canada and Newfoundland.

New species of *Lagopus*, *Melospiza* and *Passerella* described; Riley, 1142.

NEWFOUNDLAND, field notes, summer 1911; Brown, 190.

NEW BRUNSWICK; Dunham, 360.

QUEBEC, changes in the status of certain birds around Montreal; Terrill, 1361: also Macoun, 819.

ONTARIO, birds of a Canadian peat bog; Eifrig, 371: spring migration at Fishermans Island 1910; Munro, 929: Raptor migration at Pont Pelee; Taverner, 1354: list of the birds of Ottawa; Eifrig, 370.

MANITOBA; Criddle, 310, 311.

ALBERTA; Brooks and Cobb, 183.

BRITISH COLUMBIA, n. subsp. *Phlæotomus* described; Bangs, 79.

Alaska.

ALASKA, a list of the birds of the Sitkan district with accounts of distribution, moult, variation and ecology; Swarth, 1341: new sub-species of *Dryobates* described; Swarth, 1342: also Swarth, 1344.

Greenland.

GREENLAND, the avifauna of the east coast; Helms, 562: the birds of the north-eastern districts; Manniche, 846: also Henning, 571.

Oceans and Antarctic Region.

NORTH PACIFIC, the birds collected and observed during the cruise of the U.S. Fisheries steamer "Albatross" in the North Pacific Ocean, and in the Bering, Okhotsk, Japan, and Eastern seas in 1906; **Clark, 271.**

ATLANTIC AND S. PACIFIC, während der Reise von Hamburg nach Chile und zurück beobachtete Seevögel; **Paessler, 1014.**

TRISTAN DA CUNHA, occurrence of a Coot (*Fulica* sp. ?); **Sclater, 1262.**

ANTARCTICA, on the birds obtained by the Charcot expeditions 1903-5 and 1908-10; **Babin, 48: Gain, 436.**

apparatus described, **VALLILLO** Milano Atti Soc. Ital. sc. nat. **48** p. 318.—*S. australis*, the plumages, **DUERDEN** Agric. Journ. Union S. Afr. **1** No. 1, also Rep. Smiths. Inst. **1910** p. 561.—*S. massaicus*, photographs of nest, young and adult in the Kilimanjaro district, **SJÖSTEDT** Kilimandjaro-Meru Exped. pt. 3 p. 37 pl. iii.

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ORDER CASUARIIFORMES.

Dromaius irroratus, on the valvular muscle of the heart, **PIAZ** Anat. Anz. **40** p. 323.

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III.—SYSTEMATIC.

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ORDER RHEIFORMES.

Rhea rothschildi nom. n. for *R. americana* auct., *R. americana* Linn. to be substituted for *R. macrorhyncha* Scl. et auct. and *R. pennata* d'Orb. for *R. darwini* Gould et auct., **BRABOURNE & CHUBB** Ann. Mag. N. H. **8** **1911** p. 273.—*R. darwini*, semi-fossil in the north-west of the Argentine, **DABBENE** An. Mus. Nat. Buenos Aires **14** p. 304.

ORDER STRUTHIONIFORMES.

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Lyrurus tetrrix, ♂ assuming ♀ plumage, MILLAIS Bull. B. O. C. 27 p. 54; abnormal plumages, WITHERBY & OGILVIE-GRANT Bull. B. O. C. 27 p. 79; Massenflug (Russ.), KIŠENSKI Semja ochotn. Moskva 4 p. 64; Aufzucht in der Gefangenschaft (Russ.), ČEREPOVA Naša pticev. žizni Kišinev 5 p. 148; *Tetrao tetrrix* ♂ × *Lagopus albus* ♀ Gouv. Tobolsk, Beschreibung (Russ.), UŠAKOV Naša ochota 5 p. 31.

Tetrao urogallus, Herbstbalz (Russ.), KARJEV Semja ochotn. 4 p. 386; Stellungen beim Balzen, STOLL N. Balt. Waidm.-bt. Riga 7 p. 299.

Tetraogallus himalayensis incognitus subsp. n. Bucharā (Russ.), SARUDNY Mess. ornith. 2 p. 311.—*T. caspius*, Lebensgewohnheiten, Verbreitung (Russ.), NESTEROV, Moskva Ornith. et avicult. 2 1 p. 11.

Caccabis saxatilis reiseri Hercegovina, *C. s. biedermani*, Tessiner Alpen, subsp. n., REICHENOW Ornith. Monatsb. 19 p. 35.—*C. chuckar*, riproducenti in schiavitù, MARTORELLI Riv. Ital. Orn. 1 p. 88.

Ammoperdix bonhami bucharensis subsp. n. Bucharā, SARUDNY Ornith. Monatsb. 19 p. 83.

Francolinus griseus sp. n. p. 3 Uganda, *F. grantii debutescens* subsp. n. p. 3 Mt. Kenia region, *F. schuetti zappeyi* subsp. n. p. 4 Lake Victoria Bt. E. Afr., MEARN'S Misc. Collect. Washington 56 No. 20.

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Ptilopachus fuscus keniensis subsp. n. Mt. Kenia district, MEARN'S Misc. Collect. Washington 56 No. 20 p. 5.

Diardigallus diardi hybrid with *Gennaeus melanotus*, MARTORELLI Riv. Ital. Orn. 1 p. 75 1 pl.

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ORDER TURNICIFORMES.

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ORDER PTEROCLIDIFORMES.

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ORDER COLUMBIFORMES.

The pigeons of Australia figured:

Leucotreron alligator, *Ptilinopus regina*, *P. ewingii*, *P. superbus*, *Megaloprepia magnifica*, *M. assimilis*, *Myristicivora spilorrhoa*, *Lopholaimus antarcticus*, *Columba norfolciensis*, *Macropygia phasianella*, *Geopelia humeralis*, *G. placida*, *G. cuneata*, *Chalcophaps chrysochlora*, *Phaps chalcoptera*, *P. elegans*, *Histriophaps histrionica*, *Petrophassa albigenuis*, *P. rufipennis*, *Geophaps scripta*, *G. smithi*, *Lophophaps ferruginea*, *L. plumifera*, *L. leucogaster*, *Ocyphaps lophotis*, *Leucosarcia melanoleuca*, MATHEWS Birds Australia 1 pts. 2-3 pls. xx-xiv.

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D. s. azelus p. 147 Michoacan, *D. s. agnus* p. 150 Sonora, *D. s. eremicus* p. 151 L. California, *D. s. cactophilus* p. 152 Arizona, *D. s. symplectus* p. 155 Texas, *D. s. centrophilus* p. 157 Jalisco subsp. n., OBERHOLSER P.U.S. Nat. Mus. 41 p. 139.—*D. analis brevipennis* subsp. n. Java, HESSE Ornith. Monatsber. 19 p. 182.

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MUSCICAPIDAE.

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Alseonax flavipes nom. n. for *A. epulata* Sharpe from Cameroon and egg figured, BATES Ibis 1911 p. 522 pl. ix fig. 18.—*A. pseudo-grisola* sp. n. Guaso Nyiri, Bt. E. Africa, LÖNNBERG Stockholm Vet.-Akad. Handl. 47 No. 5 p. 82 p. iv.

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Bias musicus, egg from Cameroon figured, BATES Ibis 1911 p. 526 pl. ix fig. 9.

Hypothymis, a monograph of the genus, *H. azurea prophata* Malay Peninsula p. 597, *H. a. giganteptera* Natuna Isl. p. 600, *H. a. forrestia* Tenasserim p. 601, *H. a. opisthocyanea* Anamba Isl. p. 602, *H. a. idiochroa* Nicobar Isl. p. 604, *H. a. ponera* Batu Isl. p. 604, *H. a. isocara* Banjak Isl. p. 606, *H. a. leucophila* Pagi Isl. p. 607, *H. a. amclis* Nias Isl. p. 608, *H. a. calocara* Nicobar Isl. p. 610, *H. a. richmondi* Engano Isl. p. 613, **subsp. n.**, OBERHOLSER Proc. U. S. Nat. Mus. 39 p. 589.

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Piezorhynchus nitidus wardelli **subsp. n.** Cooktown N. Queensland, MATHEWS Bull. B. O. C. 27 p. 99.—*P. wellsi* sp. n.

Goram, OGILVIE-GRANT Bull. B. O. C. 27 p. 105.

Stoparola harterti sp. n. Ceram, OORT Leiden Notes Mus. 34 p. 61.

CAMPOTHIAGIDAE.

Campochaera sloetii, notes from Dutch N. Guinea, OGILVIE-GRANT Bull. B. O. C. 27 p. 104.

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PYCNONOTIDAE.

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nest described and egg figured, BATES Ibis 1911 p. 598 pl. xi fig. 15.—*P. gabonensis*, nest described, eggs figured, BATES Ibis 1911 p. 604 pl. xi figs. 1 2 4 5.

Otocompsa jocosus, naturalized in Mauritius, CARRIÉ Bul. soc. acclim. 57 p. 462.

TIMELIIDAE.

Eupetes castanonotus saturatus subsp. n. Dutch New Guinea, ROTH-SCHILD & HARTERT Ornith. Monatsber. 19 p. 157.

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TROGLODYTIDAE.

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CINCLIDAE.

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MIMIDAE.

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TURDIDAE.

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SYLVIIDAE.

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Cisticola erythrops, tongue-spots of adult and young figured, BATES Ibis 1911 p. 612 text-fig. 18.—*C. prinioides kilimensis* subsp. n. Kilimanjaro p. 1, *C. subruficapilla aequatorialis* subsp. n. Lake Naivasha p. 2, *C. s. borea* subsp. n. Lado dist. p. 3, *C. alleni* sp. n. Bt. E. Afr. p. 3, *C. strangei kapitensis* subsp. n. Bt. E. Afr. p. 4, *C. difficilis* sp. n. Mt. Kenia dist. p. 5, *C. hypoxantha reichenowi* subsp. n. Bt. E. Afr. p. 6, MEARNS Misc. Collect. Washington 56 No. 25.—*C. sudanica* sp. n. Blue Nile, MADARASZ Ann. Mus. Nat. Budapest 9 p. 340.—*C. vulpina* sp. n. Portugiesisch-Guinea, REICHENOW Ornith. Monatsb. 19 pp. 54, 73.—*C. pusilla* sp. n. Portuguese E. Afric, GUNNING & ROBERTS Ann. Transv. Mus. 3 p. 118.

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Acanthiza albiventris hamiltoni subsp. n. New South Wales, *A. iredalei* sp. n. Lake Way, W. Australia, *A. morgani* nom. n. for *A. tenuirostris* Zeitz, MATHEWS Bull. B. O. C. 27 p. 97.

Sericornis aruensis sp. n. Silbatta-batta, Aru Isls., O. GRANT Bull. B. O. C. 29 p. 29.

Apalis claudei and *A. ruddi* from S. Africa figured with additional description, SCLATER Ibis 1911 pp. 305 306 pl. iv.—*A. rhodesiae* Matabileland p. 115, *A. spelonkensis* N. Transvaal p. 116, *A. venustus* Pondoland p. 116, *A. darglensis* Natal p. 117, *A. flaviventris* Pretoria p. 117 spp. n., GUNNING & ROBERTS Ann. Transv. Mus. 3.—*A. binotata*, nest described, egg and tongue-spot figured, BATES Ibis 1911 p. 618 pl. xii fig. 15 text-fig. 20c.

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Euprinoides rufogularis, tongue-spot figured, BATES Ibis 1911 p. 616 text-fig. 20.

Sylviella denti, nest described, egg and tongue-spot figured, BATES Ibis 1911 p. 621 pl. xii fig. 17 text-fig. 19 D.—*S. whytii loringi* subsp. n. Fort Hall, Bt. E. Afr., MEARNS Misc. Collect. Washington 56 No. 20 p. 11.—*S. whytei pallidior* subsp. n. D. Ostaf., GROTE Ornith. Monatsber. 19 p. 163.—*S. hardyi* sp. n. Sierra Leone, BANNERMAN Bull. B. O. C. 29 p. 23.—*S. lowei* sp. n. St. Paul de Loanda, French Congo, OGILVIE-GRANT Bull. B. O. C. 27 p. 105.

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Camaroptera, a revision of the genus, *C. brevicaudata pulchra* p. 331 Angola, *C. b. rothschildi* p. 311 Gaboon, *C. griseoviridis abyssinica* p. 338 Harar, *C. g. harterti* p. 342 Angola, *C. g.*

sharpei p. 342 German S.W. Afr., **subsp. n.** ZEDLITZ J. Ornith. 59 p. 328.—*C. brachyura bororensis*, Portuguese E. Afr., *C. griseoviridis noomei* N. Transvaal, **spp. n.**, GUNNING & ROBERTS Ann. Trans. Mus. 3 p. 117.—*C. pileata littoralis subsp. n.* D. Ostaf., GROTE Ornith. Monatsber. 19 p. 163.—*C. griseoviridis*, nest described, egg figured, BATES Ibis 1911 p. 619 pl. xii fig. 13.

Prinia gracilis palaestinae subsp. n. Palästina, ZEDLITZ J. Ornith. 59 p. 611.

Burnesia bairdi, *B. leucopogon*, nests described, eggs and tongue-spots figured, BATES Ibis 1911 p. 615 pl. xii figs. 9–12 text-fig. 19B.

Stipiturus mallee, nest and eggs, Howe Emu 10 p. 336.

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VIREONIDAE.

Vireo crassirostris crassirostris, from the Bahamas, critical notes, TODD Ann. Carnegie Mus. 7 p. 428.

Pachysylvia ochraceiceps brevipennis subsp. n. Panama, NELSON Misc. Collect. 56 No. 22 p. 1.

AMPELIDAE.

[*Ampelis*] *Bombycilla cedrorum*, nesting habits in Conn. U.S.A., SAUNDERS Auk 28 p. 323; coloured plate, FORBUSH Bird Lore 13 p. 55.

ARTAMIDAE.

Artamus tregellasi sp. n. Rockingham, W. Australia, MATHEWS Bull. B. O. C. 27 p. 100.

PRIONOPIDAE.

Fraseria ochreatea, nest described, egg figured, BATES Ibis 1911 p. 520.

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LANIIDAE.

Cracticus mentalis introduced into Australia near Cape York, CAMPBELL Emu 10 p. 337.

Lanius excubitor, Nestbau, Ei (Russ.), KATIN Mess. Ornith. Moskva 2 p. 224.—*L. homeyeri*, in Gouv. Jenisseisk (Russ.), BUTURLIN Mess. ornith. Moskva 2 p. 176.—*L. meridionalis*, in Sussex, first record for Gt. Britain, NICHOLS Brit. Birds 5 p. 75 WITHERBY ibid p. 111.

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MAMM.

XVIII. MAMMALIA

ARRANGED BY

R. LYDEKKER, F.R.S.

CONTENTS

	PAGE
I. TITLES	5
II. SUBJECT INDEX :—	
Comprehensive and General = 6003 :—	
Treatises, Text-books	28
Institutions, Collections	28
Economics	28
Miscellaneous	29
Structure = 6007 :—	
General and Comparative	29
Histology	29
Tegument	29
Nervous system and sense-organs	29
Myology	30
Osteology, dentition	30
Alimentary system	31
Circulatory and respiratory system	32
Blood, Lymph, etc.	32
Placenta	32
Excretory organs. Special glands	32
Organs of reproduction	32
Physiology = 6011 :—	
General and miscellaneous	32

Development = 6015:—

Ovum, oogenesis, spermatozoon, spermatogenesis	..	33
Embryology	.. .. .	33
Post-embryonal	.. .. .	33

Ethology = 6019:—

General	.. .. .	33
Habits; Life-histories	.. .. .	33
Habits (of species)	.. .. .	34

Variation and Aetiology = 6023:—

Variation	.. .. .	34
Hybrids	.. .. .	34
Evolution	.. .. .	34
Heredity	.. .. .	34

Geography = 6027:—

Europe = <i>d</i> and <i>da</i> to <i>dk</i>	.. .. .	34
Scandinavia, etc. <i>da</i>	.. .. .	34
Russia in Europe <i>db</i>	.. .. .	34
German empire <i>dc</i>	.. .. .	34
Holland, Belgium, etc. <i>dd</i>	.. .. .	34
British Islands <i>de</i>	.. .. .	35
France <i>df</i>	.. .. .	35
Spain and Portugal <i>dg</i>	.. .. .	35
Italy <i>dh</i>	.. .. .	35
Hungary, Balkan Peninsula <i>dk dl</i>	.. .. .	35
Mediterranean Islands <i>dm</i>	.. .. .	35
Asia = <i>e</i>	.. .. .	35
Asiatic Russia <i>ea</i>	.. .. .	35
China and Tibet <i>eb</i>	.. .. .	35
Japan and Korea <i>ec</i>	.. .. .	35
Cochin China, etc. <i>ed</i>	.. .. .	35
British India <i>ef</i>	.. .. .	35
Malay peninsular and islands <i>eg</i>	.. .. .	35
Persia <i>eh</i>	.. .. .	36
Africa and Madagascar = <i>f</i>	.. .. .	36
North America = <i>g</i>	.. .. .	36
Central and South America, Antilles = <i>h</i>	.. .. .	37
Australasia and Southern Ocean = <i>i</i>	.. .. .	37

III. SYSTEMATIC = 6031 :—

Primates	..	..	..	..	..	..	37
A. Anthropoidea	..	..	..	..	..	..	38
Hominidae	..	..	..	..	..	..	38
Simiidae	..	..	..	..	..	..	38
Cercopithecidae	..	..	..	..	..	..	38
Parapithecidae	..	..	..	..	..	..	38
B. Lemuroidea	..	..	..	..	..	..	38
Chiroptera	..	..	..	..	..	..	38
Pteropodidae	..	..	..	..	..	..	39
Rhinolophidae	..	..	..	..	..	..	39
Vespertilionidae	..	..	..	..	..	..	39
Emballonuridae and Phyllostomatidae	..	..	..	..	..	..	39
Incertae sedis	..	..	..	..	..	..	39
Insectivora	..	..	..	..	..	..	39
Galeopithecidae	..	..	..	..	..	..	39
Macroscelididae and Tupaiidae	..	..	..	..	..	..	39
Talpidae	..	..	..	..	..	..	40
Soricidae	..	..	..	..	..	..	40
Erinaceidae	..	..	..	..	..	..	40
Centetidae	..	..	..	..	..	..	40
Incertae Sedis	..	..	..	..	..	..	40
Carnivora	..	..	..	..	..	..	40
A. Carnassidentia	..	..	..	..	..	..	40
Felidae	..	..	..	..	..	..	40
Viverridae and Hyænidae	..	..	..	..	..	..	41
Canidae	..	..	..	..	..	..	41
Ursidae and Procyonidae	..	..	..	..	..	..	41
Mustelidae	..	..	..	..	..	..	42
B. Pinnipedia	..	..	..	..	..	..	42
Rodentia	..	..	..	..	..	..	42
Sciuridae	..	..	..	..	..	..	42
Anomaluridae, Castoridae, Jaculidae and Gliridae	..	..	..	..	..	..	42
Muridae	..	..	..	..	..	..	43
Hystricidae, Geomyidae and Heteromyidae	..	..	..	..	..	..	45
Octodontidae and Caviidae	..	..	..	..	..	..	46
Leporidae and Ochotonidae	..	..	..	..	..	..	46

	PAGE
Ungulata	46
A. Artiodactyla	46
Bovidae	46
Antilocapridae and Merycoidodontidae	47
Giraffidae	47
Cervidae	48
Tragulidae	48
Extinct Families	48
Camelidae	48
Hippopotamidae and Suidae.. .. .	48
B. Perissodactyla	49
Equidae	49
Rhinocerotidae and Tapiridae	49
Titanotheriidae, Lophiodontidae and Chalicotheriidae	49
C. Hyracoidea	49
D. Proboscidea	50
Sirenia and Cetacea.. .. .	50
Edentata	51
Marsupialia	51
Monotremata	51

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II.—SUBJECT INDEX.

6003 to 6027

N.B.—For full References go to Titles.

COMPREHENSIVE AND GENERAL. 6003

Treatises, Text-Books, etc.

Animalium Generum et Subgenerum; Schulze, 448.

Zoogeographical atlas; Bartholomew, 21.

Classification; Shufeldt, 460.

Linnean genera and types; Thomas, 491.

Big Game Rhodesia; Letcher, 272.

Game Animals India and Africa; Lydekker, 295, 296.

Institutions, Collections.

Big Game collection Vienna; Anon, 12.

Chilian Museum; Quijada, 399.

American Bison herds; Hornaday, 194.

Economics.

Älteste Haustierte Asiens; Duerst, 114.

"Unicorn" Nepalese Rams artificial; Lydekker, 294.

Frühgeschichte Haustiere; **Keller**, 225.

Renntier und seine Pflege; **Bergström**, 34.

Haustiere Mittelmeer-Inseln; **Keller**, 224.

Economic importance *Mus sylvaticus*; **Ritzema Bos**, 414: *Eliomys quercinus*; **Ritzema Bos**, 415.

Pribiloff Sealing; **Thompson**, 507.

Shore-Whaling and science; **Andrews**, 11.

Miscellaneous.

L'espèce en zoologie; **Trouessart**, 517.

Origine préhistorique des Mammifères domestiques; **Trouessart**, 515.

Primitive Mammals; **Smith**, 463.

Antelopes without water; **Brockman**, 53.

Persistence of generic types; **Leche**, 268.

Adaptation and radiation Primates; **Loomis**, 280.

Longevity; **Mitchell**, 344.

Mammoth and Rhinoceros mummies; **Niezabitowski**, 365, 366.

On Cuts Australian Marsupial bones work of *Thylacoleo*; **Spencer & Walcott**, 468.

Worked bones *Rhinoceros antiquitatis*; **Kowarik**, 257b.

Palæolithic cavern-pictures; **Capitan, Breuil et Peyrony**, 71a.

Prehistoric picture Red Deer; **Lankester**, 264.

STRUCTURE. 6007

General and Comparative.

Anatomy *Cryptoprocta*; **Carlsson**, 73: *Scæopus*; **Poche**, 388.

Anatomie tête *Kogia*; **Danois**, 94.

Viscères et squelette *Kogia*; **Danois**, 95.

Cetaceennase; **Gruhl**, 157.

Mammalian cranial characters in Cynodont Reptiles; **Broom**, 57.

Histology.

Connettivo lamellare corpuscoli **Pacini**; **D'Antona**, 97.

Histologie Edentaten; **Dietrich**, 102.

Tegument.

Il pelo e sua innervazione; **Majocchi**, 303.

Beachtenswerte Haarsorte und Haarformensystem; **Toldt**, 509.

Poils Homme et Animaux; **Lambert**, 261.

Behaarung Menschenrassen und Menschenaffen; **Friedenthal**, 141.

Richtung der Haare Affenembryonen; **Schwalbe**, 450.

Système pileux Lapin; **Chaine**, 78.

Haare der Wale; **Japha**, 210, 211.

Skin *Monodon* and *Delphinapterus*; **Bertelsen**, 36.

Tierhaaratlas; **Friedenthal**, 142.

Haut des Nackthundes; **Kohn**, 246.

Organo cheratogeno *Equus*; **Mobilio**, 346.

Callosities, structure; **Shattock**, 458.

Kastanien und Sporn Einhufer; **Keuchenius**, 229: **Vermeulen**, 526.

Horndrüse Ziege; **Schietzel**, 435.

Cutaneous glands Ruminants; **Brinkmann**, 49.

Tasche e corpi ghiandolari suborbitali in Ruminanti; **Beccari**, 29.

Mammæ growth-changes *Dasyurus*; **O'Donoghue**, 369.

Geweihwachstum Hirsche; **Rhumbler**, 411.

Big Ox-horns; **Cabrera**, 66.

Nervous System and Sense-Organs.

Brain Argentine Mammals; **Jakob y Onelli**, 209.

Brain-histology *Hylobates*; **Mott, Schuster & Sherrington**, 356: Histologie Rinde Grosshirns Hausmaus; **Vries**, 534.

Grosshirnmantel *Macropus*; **Haller**, 162.

Cortical cell-lamination hemispheres *Papio*; **Schuster**, 449.

Cerebral cortex *Cavia*; **Abel**, 1.

Cortecia cerebrale Microchiroteri;
Zunino, 557.

Myeloarchitektonik und Myelogenie
Cortex Cerebri *Erinaceus*; **Flores, 133.**

Gliederung des Cortex cerebri Antropomorphen; **Mauss, 314.**

Cytoarchitectonie Grosshirnrinde
Nagetiere; **Droogleever-Fortuyn, 112:**
Cytoarchitektonik Zwischenhirns Cercopitheken; **Friedemann, 140.**

Mittel- und Zwischenhirn Kaninchens; **Quensel, 398.**

Rombo-encefalo *Sus*; **Luna, 285.**

Kerne Diencephalon; **Neiding, 363.**

Circonvolutions cérébrales *Elephas*;
Montané et Bourdelle, 353.

Évolution gyrus reuniens Primates;
Anthony et Santa-Maria, 14.

Eminentia sacularis; **Perna, 382.**

Corpus callosum and psalterium;
Valkenburg, 523.

Divisione cervelletto; **Comolli, 85:**
Cervelletto *Simia*; **Luna, 284.**

Hypophysis cerebri; **Trautmann, 512:**
Staderini, 470, 471: **Marro, 308.**

Corpo pineale; **Cutore, 89.**

Matrice e membrana cheratogena
dello zoccolo Cavallo; **Vitali, 529.**

Nervenendigungen an Sinushaaren
des Rindes; **Tretjakoff, 513.**

Nervi del plesso brachiale *Bos*;
Mobilio, 347.

Riechbahnen Kaninchens; **Grzywo-
Dąbrowski, 158.**

Kehlkopfnerven und Arterien-
bogenderivate *Lama*; **Kajava, 219.**

Innervation Flughaut Chiropteren;
Zabusov, 552.

Nervenendigungen im Herzen; **Martynov, 309.**

Rückenmark *Halicore*; **Dexler und
Eger, 100.**

Zungenpapillen der Wale; **Wolf, 541.**

Lobus parolfactorius; **Edinger, 115:**
Becari, 28.

Luftsäcke Equiden; **Skoda, 462.**

Sekundäre Hörbahnen Katze;
Winkler, 539.

Gehörgang; **Freund, 138.**

Gehörbahnen Katze; **Winkler, 540.**

Labyrinth; **Kolmer, 252.**

Ear-bones Mouse development;
Jenkinson, 212.

Hammer-Amboss-Verbindung; **Frey, 139.**

Musculus stapedius u. Stapes; **Eschweiler, 120.**

Histologie Auges *Pteropus*; **Fritsch, 143.**

Thalamus *Cercopithecus*; **Voght, 530.**

Opticusendigungen *Lepus*; **Loepp, 276.**

Gesichtsmuskulatur u. Nervus facialis
Hylobates; **Ruga, 425.**

Cellules vivantes (œil); **Mawas, 316.**

Muscolo dilatatore della pupilla;
Mongiardino, 352.

Tapetum lucidum; **Hess, 175.**

Flocculi dell'iride *Equus zebra*;
Gallenga, 148.

Myology.

Musculi pectorales; **Zuckerkindl, 555.**

Myology *Anthropopithecus Papio*;
MacDowell, 300.

Muskeln Halbaffenhand; **Kajava, 218.**

Musculus flexor pedis Primaten;
Sawalischin, 429.

Muskulatur der Darmzotten *Erinaceus*; **Kazakov, 222.**

Muskelfasern Speiseröhre Pferdes;
Sošestvenskij, 467.

Musculi serrati *Hippopotamus*;
Maurer, 313.

Kletterextremität Coendu; **Zurkirch, 557.**

Osteology.

Osteology, *Semnopithecus*; **Vram, 532:** **Ocelot, Virchow, 527:** *Odobenidae*; **Hasse, 169, 170:** *Oxydactylus Stenomylus Diceratherium*; **Peterson, 384:** *Hyperhippidium*; **Seive, 456:** *Flying-Lemur*; **Shufeldt, 461.**

Osteology and dentition Giraffes;
Rothschild et Neuville, 423: *Oligocene Rhinoceroses*; **Roman, 421.**

Histologie des os *Halitherium*; **Le-feuvre**, 269.

Primordialcranium Kaninchens; **Voit**, 531.

Primordialcranium Hundeembryo; **Olmstead**, 371.

Typologie des Primatencraniums; **Oppenheim**, 373.

Craniology *Bos*; **Ewart**, 124.

Craniology and dentition *Heteromyidae*; **Goldman**, 154.

Cranial abnormalities *Simiidae*; **Patten**, 378, 379.

Entwicklung eines „sekundären“ Kiefergelenkes bei Säugern; **Claus**, 82.

Tränenbein; **Knottnerus-Meyer**, 239: Tränenbein *Ovibos*; **Kowarzik**, 257.

Preorbital depression *Equidae*; **Studer**, 481.

Jaw-articulation, in connection with Theromorpha; **Fuchs**, 145.

Entstehung eines „sekundären“ Kiefergelenkes bei Säugern; **Gaupp**, 149.

Kiefergelenk Rodentia; **Höfer**, 179: *Hyrax*; **Lubosch**, 283.

Septomaxillare; **Fuchs**, 144.

Phylogese der Gelenke für die Beurteilung des Kaugelenkes; **Lubosch**, 281.

Appareil hyoïde; **Lelièvre et Retterer**, 270.

Appareil hyoïdien Chien; **Retterer et Lelièvre**, 403.

Rest der Epiphysenscheiben im Epistropheus; **Lebedinsky**, 267.

Rückensaite Verknöcherung der Wirbel; **Schaffer**, 431.

Variabilität Wirbelsäule; **Frets**, 136.

Sternum development; **Whitehead & Waddell**, 537.

Episternum Schafe; **Zimmermann**, 551.

Geschlechtsunterschiede Becken Primaten; **Broek**, 55.

Os acetabuli Primaten; **Broek**, 56.

Naegele-Becken *Macacus*; **Blunt-schli**, 39.

Osso trasverso carpo Chiroterri; **Mileo**, 327

Tendons de l'aile et patte postérieure Chiroptera; **Retterer et Lelièvre**, 405.

Sésamoides vésiculo-fibreux; **Retterer et Lelièvre**, 404.

Chondriome des cellules cartilagineuses; **Dubreuil**, 113.

Os penis; **Montlezun**, 355: **Pohl**, 396: **Lönningberg**, 274.

Dentition.

Dentition and osteology Fayum Tertiary Mammals; **Schlosser**, 440.

Tooth-germs *Macropus* and hemology Marsupial dentition; **Hopewell-Smith & Tims**, 191.

Durchbruch der bleibenden Zähne und Resorption des Milchgebisses; **Fischer**, 129.

Anatomie des Gebisses; **Terra**, 489.

Primatengebisses; **Adloff**, 2

Platyrrhinengebiss; **Bluntschli**, 40.

Dentition *Cynocephalus*; **Vram**, 533: Rodentia; **Höfer**, 179: *Desmotylus*; **Merriam**, 323: *Delphinodon*; **True**, 522: fossil Rhinoceroses; **Koch**, 243, 244.

Structure d'ivoire; **Branca**, 45.

Alimentary System.

Morphologie des harten Gaumens; **Freund**, 137.

Salivary glands; **Bensley**, 32.

Glandula lacrimalis praeparotidea bei Nagetieren; **Kultschitzky**, 259.

Kernknospung in Plattenepithel *Cavia*; **Ditlevsen**, 102.

Speiseröhre Pferde; **Sošestvenskij**, 467.

Magen Schlankaffen; **Berenberg-Gossler**, 33: Wiederkäufer; **Reetz**, 402: Wiederkäufer vornehmlich Traguliden; **Schmidt**, 443: foetal Swine; **Hopffe**, 192.

Darmzotten *Erinaceus*; **Kazakov**, 222.

Histologie Leber; **Sterling**, 477.

Leber Faultiere; **Burlet**, 61.

Vesica fellea e ductus choledochus; **D'Agata**, 91.

Chondriom der Pankreaszelle Nager; **Mislawsky**, 343.

Pankreas beim Elefanten; **Manuilow**, 306.

Circulatory and Respiratory Systems.

Larynx Marsupials; **Henkel**, 173.

Tonsillen *Felidae*; **Majewski**, 302.

Flimmerzellen des Trachealepithels; **Loginoff**, 277.

Histologie Kehlkopfes Haussäugetiere; **Eichler**, 116.

Fibre musculari liscie in polmone; **Caradonna**, 72.

Tissu cartilagineux cœur Lapin; **Vanzetti**, 525.

Fascio atrioventricolare; **Gaetani**, 147.

Plexus chorioideus; **Hworostuchin**, 201.

Artères striées; **Mouchet et Escande**, 357.

Arteria caudalis; **Hochstetter**, 178.

Limb-arteries Elephant; **Zucker-kandl**, 555.

Venous system Marsupials; **Schulte**, 447.

Venensystem *Bradypodidae*; **Burlet**, 62.

Milzvenen (Milzsinus); **Mollier**, 350.

Sinus der Milz Primates; **Mangubi-Kudrjatzewa**, 305.

Orbitalen Venen-Sinus *Lepus*; **Markowski**, 307.

Ursprung der Fussvene; **Schmaltz**, 442.

Blood, Lymph, etc.

Hematies; **Retterer et Lelièvre**, 406.

Erythrocyten und Blutplättchen; **Schilling-Torgau**, 436, 437.

Altersvariationen in Anzahl weisser Blutkörperchen; **Lindberg**, 273.

Lymphknoten Hunde; **Merzdorf**, 325.

Lymphgefässe *Bos*; **Baum**, 24.

Placenta.

Wiederkäuerplacentome; **Strahl**, 478.

Verhalten des Chorions des Rindes; **Tandler und Keller**, 485.

Excretory Organs and Special Glands.

Thymus; **Maximow**, 317.

Schweinethymus; **Zotterman**, 553.

Thyroid histology; **Mawas**, 315.

Sistema paratiroideo accessorio; **Pepere**, 381.

Harnblase Haustiere; **Bauch**, 23.

Prostata Hunde; **Kracht-Paléjeff**, 258.

Epithelzellen Säugetierniere; **Zimmermann**, 543.

Säugetierniere; **Gerhardt**, 150.

Capsule surrénale Chiroptera; **Colson**, 84.

Renal tubules; **Huber**, 196.

Organs of Reproduction.

Glandulae bulbo-urethrales; **Kniesling**, 238.

Geschlechtsorgane Haussäugetiere; **Schmaltz**, 441.

Tubi seminiferi; **Monterosso Schlatter**, 354.

Saisondimorphismus des Maulwurfhokens; **Tandler und Grosz**, 484.

Männliches Urogenitalsystem *Halicore*; **Riha**, 413.

Female genitalia *Sarcophilus*; **Flynn**, 134.

Clitoris; **Böhm**, 41.

Ovaire; **Athias**, 16.

PHYSIOLOGY. 6011

General and Miscellaneous.

Verhalten des Chorions des Rindes; **Tandler und Keller**, 485.

Motor localisation *Hylobates*; **Mott and others**, 356.

Mechanismus der Extremität des Rindes Tieflands- und Höhengschläge; **Behm**, 30.

Factors in progression; **Brown**, 59.

Blood-volume and relation to surface-area; **Dreyer & Ray**, 111.

Cervello fisiologia delle parti più interne; **Monaco**, 351.

Rumination; **Schneeberger**, 444.

Galle Wallrosse; **Hammarsten**, 163.

Schnurrborsten; **Gabriel**, 146.

Umstimmung des Geschlechtscharakters durch Austausch der Pubertätsdrüsen; **Steinach**, 476.

Rolle accessorischer Geschlechtsdrüsen; **Ivanoff**, 203.

Winterschlaf; **Henriques**, 174.

Stoffwechsel des Winterschläfers; **Nagai**, 361.

DEVELOPMENT. 6015

Ovum; Oogenesis; Spermatozoon; Spermatogenesis.

Ovulation; **Kirkham**, 231.

Euf Cobaye; **Lams**, 262.

Metabolismo in ova embrionale; **Russo**, 426.

Spermatogenesis Opossum; **Jordan**, 215.

Spermien Affen; **Retzius**, 407.

Sex determination in yolk; **Kovalevsky**, 255.

Speciescharaktere Bovidenföten; **Kohn**, 247.

Reproduction Brown Rat; **Miller**, 342.

Gestation Mice; **Daniel**, 93.

Embryology.

Embryologie; **Beneden**, 31.

Embryologie Ferret; **Yeates**, 548.

Embryo Ferret-head; **Radford**, 401 : *Grampus*; **Danois**, 96.

Occlusione vie biliari in embrioni *Lepus*; **Giannelli**, 152

Eutherian and Metatherian blastocyst; **Hubrecht**, 197.

Development vomer; **Terry**, 490 : sternum; **Whitehead & Waddell**, 537 : jugular lymph-sacs Cat; **Huntington & McClure**, 200 : hæmolymp glands Sheep; **Meyer**, 326 : ear-bones Mouse; **Jenkinson**, 212 : lymphatic system; **Huntington**, 197.

Origin Mesenteric lymph-sac Pig; **Baetjer**, 19 : pulmonary arteries; **Bremer**, 47.

Entwicklung Säugergehirns; **Döllken**, 103 : *Musculus stapedius* u. *Stapes*;

(N-9186 f)

Eschweiler, 120 : *Eies Mus*; **Sobotta**, 464 : Marsupials; **Arlt**, 15 : Lungenarterien Meerschweinchen; **Fedoroff**, 126 : Supraoccipitale und Interparietale Schaf; **Claus**, 82.

Wachstum der Keimblase im Uterus; **Sobotta**, 465.

Entwicklungsgeschichte der Kerne Thalamus opticus Kaninchen; **Bianchi**, 37.

Primordialcranium Hundeembryo; **Olmstead**, 371.

Entwicklung Parathyreoideae accessoriae und Thymus; **Hanson**, 166.

Histogenese Thymus; **Maximow**, 317.

Embryologie Thymus und Parathyreoidea; **Ruben**, 424.

Schweinthymus; **Zotterman**, 553.

Entstehung eines „sekundären“ Kiefergelenkes bei Säugern; **Gaupp**, 149.

Abkömmlinge der Kiementaschen und Schicksal der Halsbucht; **Rabl**, 434.

Bau des Nabelstranges Pferde; **Hauptmann**, 170.

Testicondie *Bradypodidae*; **Broek**, 54.

Verdoppelung von Organen (Mamma); **Bresslau**, 48.

Post-Embryonal.

Growth-changes Mammæ *Dasyurus*; **O'Donoghue**, 367.

ETHOLOGY. 6019

General.

Animals without water; **Brockman**, 53.

Adaptations Primates; **Loomis**, 280.

Colour Bats; **Cuénot**, 88.

Coloration Zebras Antelopes etc. not protective; **Roosevelt**, 422.

Warning coloration *Lophiomys*; **Pocock**, 393.

Stoffwechsel des Winterschläfers; **Nagai**, 361.

Habits; Life-histories.

Habits Indiana Mammals; **Evermann & Clark**, 122 : Monkeys; **Fitz-Simons**, 130 : Gibbons; **Welch**, 536 :

Spiny Pocket-Mice; **Goldman**, 154 :
Duikers and Hyraxes; **Christy**, 80 :
Whales; **Mörch**, 348.

Behaviour Squirrels; **Yoakum**, 550.

Of Species.

Lebensweise *Felis minuta*; **Jacobson**,
208 : *Dipodidae* in Russland; **Vdovin**,
525 : *Arctomys* in Mongolei; **Osakin**,
376 : Puma, Jaguar, Bisamsechwein;
Koshny, 253.

Habits *Scalops*, *Geomys*; **Scheffer**,
433, 434 : *Situtunga*; **Hughes**, 198 :
Moose; **Oberholzer**, 368.

VARIATION AND AETIOLOGY.

Variation.

Variation *Mus rattus*; **Lapicque et**
Legendre, 265.

Abnormal coloration *Mus rattus*;
Ghidini, 151 : Zebra; **Lydekker**, 290.

Asymmetrical skull *Ovis*; **Jacobi**,
207.

Abnormal foot Palm-Civet; **Pocock**,
391.

Abnormitäten *Alces*; **Broch**, 50.

Supernumerary digits *Equus*; **Flo-**
derus, 132.

Pseudohermaphroditismus *Equus*;
Mörkeberg, 349.

Hybrids.

Kreuzungen höherer Tiere; **Borg-**
greve, 43.

Hybrid Lemurs; **Pocock**, 389 :
Chilian Sheep and Goats; **Neveu-**
Lemaire et Grandidier, 367 : *Bison*
americanus × *europaeus*; **Ivanoff**,
204 : Equines; **Pocock**, 394.

Fruchtbarkeit der Hybride *Equidae*;
Ivanoff, 206 : Hybriden *Bos taurus*
und *B. americanus*; **Ivanoff**, 205.

Evolution.

Descent of Mammals from Cynodont
Reptiles; **Broom**, 57.

Evolution Primates; **Loomis**, 280.

Sudden origin new types; **Oswald**,
377.

Continuity of development Titano-
theres; **Osborn**, 375.

Entstehung hörnertragender Säuge-
tiere; **Kovalevsky**, 256.

Mammary glands derived from Am-
phibian lateral line and Mammals
from Amphibia; **Oswald**, 377.

Lamarckism and callosities; **Shattock**,
458.

Phylogeny Cattle; **Malsburg**, 304.

Ursache von Zeichnung und Farbe
in der Tierwelt; **Kobelt**, 242.

Heredity.

Inheritance colour-pattern Cat;
Pocock, 395.

Colour-inheritance Shorthorns;
Laughlin, 266.

Inheritance Race-horses; **Bunsow**,
60.

Hereditary control in Armadillo
quadruplets; **Newman & Patterson**,
364.

GEOGRAPHY. 6027

Europe. *d*

Scandinavia. *da*

Norway Säugetiere; **Collett**, 83.

Jutland extinct list; **Hald**, 160.

Russia in Europe. *db*

Abchasien new Bats; **Satunin**, 427.

Bessarabien und Podolien, *Chiroptera*;
Brauner, 46.

Sebastopol Tertiary list; **Borisjak**,
44.

German Empire. *dc*

Säugetiere Deutschlands; **Schäff**,
430.

Brüxer Braunkohlenbecken Wirbel-
tierreste; **Schlosser**, 439.

Kronstadt Tertiary list; **Toula**, 510.

Östpreussen Mammut; **Klien**, 232.

Bohemia Tertiary list; **Kowarzik**,
257a.

Holland, Belgium. *dd*

Belgium new Aurochs; **Malsburg**,
304.

British Islands. *de*

England new Pleistocene Shrews;
Hinton in Barrett-Hamilton's Hist.
Brit. Mamm.

Northumberland remains of Roman
age at Corstopitum and new sp. Ox;
Meek & Gray, 319.

Newstead, Melrose, Mammal remains;
Ewart, 125.

Tweed area list; Evans, 121.

France. *df*

Paris Basin Tertiary lists; Stehlin,
474, 475.

Dordogne cavern-pictures; Capitan,
Breuil et Peyrony, 71a.

Spain and Portugal. *dg*

Spain new Ibex; Cabrera, 65.

Portugal list; Seabra, 455: Tertiary
Mammals; Harlé, 167.

Italy. *dh*

Italy list; Lepri, 271.

Hungary. Balkan Peninsula. *dk*

Ungarn, Diluviale Säugetierreste der
Balatongegend; Kadić, 216, 217:
Pliozän-Knochenfund bei Polgárdi;
Kormos, 254.

Mediterranean Islands. *dm*

Mittelmeer-Inseln Haustiere; Keller,
224.

Sardinia and Corsica wild and tame
Swine; Trouessart & Dehaut, 520.

Samos new *Hipparion*; Studer, 481.

Asia (collectively). *e*

Asia new Porcupines; Müller, 360.

Oriental Region new Squirrels;
Robinson & Wroughton, 420.

S. E. Asia new spp.; Schwarz, 451.

Central and W. Asia new Shrew and
Rodents; Thomas, 506.

Asiatic Russia. *ea*

Transbaikalia Pleistocene list and
n. spp.; Pavlow, 380.

Siberia new Vole; Thomas, 496.

Yakutsk new Elk; Millais, 329.

(N-9186 f)

China and Tibet. *eb*

China new spp.; Miller, 334.

China Ladak etc. new *Muridae*;
Thomas, 495.

Kan-su and Sze-chwan new Rodents;
Thomas, 503, 505.

Shen-si and Kan-su new *Capreolus*;
Miller, 340.

Shen-si list and n. spp.; Thomas,
492.

Gobi und Tibet subsp. n.; Matschie,
311.

Japan and Korea. *ec*

Japan new Bat; Thomas, 502:
new Porpoise; Andrews, 9.

Korea new Musk-Deer; Hollister,
183.

Cochin China, etc. *ed*

Tonkin, new Monkey; Trouessart,
519.

British India. *ef*

Game Animals; Lydekker, 296:
Tertiary *Giraffidae*; Pilgrim, 387.

New Flying Squirrels; Wroughton,
546.

Nilgiris Big Game; Fletcher, 131.

Sind new Rodents; Thomas, 493:
Wroughton, 544.

Himalaya Big Game; Stebbing,
473: new *Mustela* and *Microtus*;
Wroughton, 543.

Lahul new Ibex; Camerano, 69.

Kashmir, new Shrews; Miller, 341.

Malay Peninsula and Islands. *eg*

East Indian Archipelago, Zoogeography and Wallace's line; Kampen,
220.

Dutch Malaya, list and new Rodents;
Allen, 16.

Indo-Malaya, new and other Squirrels;
Robinson & Wroughton, 419.

Malaya new Tupais; Lyon, 298:
new Rodents and Bat; Miller, 331.

Malay Peninsula and islands n. spp.;
Robinson & Kloss, 417, 418.

Ulu Langat Selangor list; **Robinson**, 416.

Negri Sembilan list; **Kloss**, 236.

Pahang list and n. subsp.; **Kloss**, 234.

Trengganu Archipelago, list and n. spp.; **Kloss**, 235, 237.

Rhio-Island Archipelago, new Mouse-Deer; **Miller**, 336.

Java new Pleistocene spp.; **Stremme**, 479.

Borneo, new *Muridae*; **Thomas**, 495; and adjacent islands list and n. spp.; **Lyon**, 299.

Sumatra, new Siamang; **Pohl**, 397.

Philippines, new *Sciuropterus*; **Hollister**, 188.

Luzon, new Rats; **Hollister**, 186.

Celebes, n. spp.; **Revilliod**, 408.

Persia. *eh*

Seistan Big Game; **Kennion**, 227.

Africa and Madagascar. *f*

Verbreitung africanischer Säugetiere; **Stromer**, 480.

Africa, Game Animals; **Lydekker**, 295: **Tjader**, 508: new Insectivores and Rodents; **Thomas**, 501: new Rodents and Carnivores; **Heller**, 172: new Hyænas; **Cabrera**, 64: new Mongooses and Otter; **Thomas**, 504: *Scurinae* taxonomy; **Müller**, 359: new *Muridae*; **Thomas**, 497: new Duikers; **Wroughton**, 544: new Giraffes; **Lydekker**, 292.

Somaliland, new Hare and *Madoqua*; **Brockman**, 51, 52.

Arusiland, new Hare; **Brockman**, 52.

Upper Nile, list and n. spp.; **Wroughton**, 547.

Fayum, Tertiary fauna and new spp.; **Schlosser**, 440.

East Africa, n. spp.; **Dollman**, 109: new Bats; **Allen**, 4: new Rodents and Hyrax; **Dollman**, 104, 107: Giraffes; **Rothschild et Neuville**, 423: new Zebra; **Ridgeway**, 409: **Lydekker**, 290.

B. E. Africa, new *Dinotherium*; **Andrews**, 8.

Uganda, faunistic notes; **Christy**, 80: distribution of game; **Knowles**, 241: Wild Pigs; **Woodhouse**, 543.

German E. Africa, new Waterbucks; **Matschie**, 310.

Muansa, G. E. A., n. spp.; **Matschie**, 312.

Kilimanjaro, new *Heliosciurus*; **Müller**, 359.

Rhodesia, Big Game; **Letcher**, 272.

Transvaal, new Chacma; **Pocock**, 390.

Kalahari, new Rat; **Dollman**, 108.

W. Africa, new Bat; **Dollman**, 105: new Rodents; **Dollman**, 106.

Congo, new *Cercopithecus*; **Büttikofer**, 63.

Nigeria, new Klipspringer; **Lydekker**, 289: new Squirrel, **Dollman**, 110.

Gambia and Fouta Jallon, list and n. spp.; **Thomas**, 499.

Algeria, new Gazelle; **Lydekker**, 289.

Mauritania, new *Acomys*; **Kollmann**, 251.

Madagascar, new *Microcebus*; **Kollmann**, 249.

North America. *g*

N. America, Musk-rats; **Hollister**, 180.

Greenland new genus *Leporida*; **Barrett-Hamilton Hist. Brit. Mamm.**

N. Pacific, new Porpoise; **Andrews**, 10.

Alaska, list and n. spp.; **Swarth**, 482: and Vancouver new Marmots; **Swarth**, 483.

Yukon, new Pleistocene *Arctotherium*; **Lambe**, 261.

Canada, new Rodents and Bats; **Hollister**, 182.

California, new *Arctotherium*; **Merriam**, : new *Capromeryx*; **Taylor**, 320: new fossil Beaver; **Kellogg**, 226: Rancho La Brea, Pleistocene fauna; **Merriam**, 324.

Colorado list; **Cary**, 76a.

Indiana list; **Hahn**, 159: Maxinkuckee district, list; **Evermann & Clark**, 122.

Louisiana, new Puma; **Hollister, 187.**

Maine, new Prehistoric Mink; **Loomis, 279.**

Maryland, new Shrew; **Hollister, 181.**

Mexico, new Shrews; **Miller, 337.**

Minnesota, Pleistocene list; **Winchell, 539.**

Tertiary Mohave desert, mammalian remains; **Merriam, 321.**

Nebraska Miocene new *Moropus*; **Barbour, 20**; new Carnivora; **Cook, 87**; new Rhinoceros; **Peterson, 385**; **Cook, 86.**

Nevada, list and n. sp.; **Taylor, 486**; Tertiary list and n. spp.; **Merriam, 322.**

Virginia, new Rabbit; **Mearns, 318a.**

Wyoming, new Pocket-Mouse; **Carey, 76**; new Tertiary Cameloids; **Loomis, 278.**

Central and South America, Antilles, etc. *h*

S. America *Felidae*; **Cabrera, 68**; new Bat and Mice; **Thomas, 494**; new Rodents; **Thomas, 500.**

Central and S. America, new Rat and Opossums; **Goldman, 155.**

Panama and Antilles, new Raccoons; **Miller, 330.**

West Indies, zoological relationships and new spp.; **Allen, 3.**

Cuba, fossil list; **Spencer, 467.**

Argentina, new *Hoplophorus*; **Richter, 412.**

Brazil Carnivora; **Ihering, 203.**

Cordilleran plateaus, list; **Neveu-Lemaire et Grandidier, 367.**

Costa Rica, new Shrew; **Miller, 337.**

Venezuela, list and n. spp.; **Allen, 5.**

Australasia and Southern Ocean. *i*

Australasia new Monotremes; **Kowarik, Zool. Anz. 35 p. 213 1909.**

Caroline Is., new Bat; **Miller, 335.**

Sunday I. Kermadec Gp., Rats; **Oliver, 370.**

Aru and Kei Islands, list and n. sp.; **Beaufort, 26.**

New Guinea, new Phalanger; **Foerster & Rothschild, 135**; feral Swine; **Bauschke, 25**; new Bats and Rats; **Thomas 498, 502.**

Dutch New Guinea, list and n. spp.; **Jentink, 213, 214.**

Australia and New Zealand, new genera of Squalodonts; **Hall, 161.**

Tasmania, new *Nototherium*; **Scott, 452.**

III.—SYSTEMATIC. 6031

I.—PRIMATES.

Adaptation, radiation and evolution, **LOOMIS Amer. Nat. 46 p. 479**; évolution du gyrus reuniens, **ANTHONY & SANTA-MARIA Paris C. R. Acad. sci. 153 p. 1250**; Os acetabuli, **BROCK t.c. p. 185**; Geschlechtsunterschiede im Becken, **BROEK Arch. Anat. Physiol. Anat. Abt. 1911 p. 163**; Behaarung, **FRIEDENTHAL Zs. Ethn. Berlin 43 p. 974**; Richtung der Haare Embryonen, **SCHWALBE No. 450**; Bau der venösen Sinus der Milz, **MANGUBI-KUDRJAVTZEWA Anat. Hefte Wiesbaden Abt. 1 39 p. 697**; Spermien bei Anthropoden, **RETZIUS [In Retzius, Biolog. Untersuchungen N.F. xv] 1910 p. 83**; Labyrinth, **KOLMER Arch. mikr. Anat. 74 p. 259**; Myology, *Anthropopithecus* and *Papio*, **MACDOWELL Amer. J. Anat. 10 p. 431**; Musculus flexor communis brevis digitorum pedis, **SAWALISCHIN Morph. Jahrb. 42 p. 557**; callosities, **SHATTOCK Proc. R. Soc. Medicine July 1911 p. 9**; cortex cerebri, **MAUSS J. Psychol. Leipzig 18 p. 410**; Typologie des Primaten-craniums, **OPENHEIM Zs. Morph. 14 p. 1**; Platyrrhinengebiss und Stammesgeschichte des Primatengebisses, **BLUNTSCHLI Anat. Anz. 38 ErgH. p. 120**; Phylogenese des Gebisses, **ADLOFF Zs. Morph. 13 p. 505**; genera et subgenera, **SCHULZE No. 448**; of South Africa, **FITZSIMONS No. 130**; Fayum Tertiary, **SCHLOSSER Beitr. Pal. u. Geol. Öster.-Ungar. 24 p. 52.**

A.—Anthropoidea.

HOMINIDAE.

†*Pithecanthropus* notes, KEITH
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SIMIIDAE.

Cranial abnormalities, PATTEN J. Anat.
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changes, JACOBI Dresden Abh. u. Ber.
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Grive-Saint-Alban, DÉPÉRET Paris C. R.
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MOTT, SCHUSTER & SHERRINGTON Folia
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Morph. Jahrb. 44 p. 129; notes,
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muelleri albibarbis subsp. n. Borneo,
LYON U. S. Nation. Mus. Proc. 40
p. 142.

Siamanga syndactylus volzi subsp. n.
Sumatra, POHL Zool. Anz. 38 p. 53.

Simia satyrus, cervelletto, LUNA
Monitore zool. ital. 22 p. 106.

Symphalangus see *Hylobates*.

CERCOPITHECIDAE.

Arctopithecus stands for *Midas* and
replaced by *Lasiopyga*, ELLIOT Bull.
Amer. Mus. Nat. Hist. 30 p. 341;
Thalamus, VOET J. Psychol. Leipzig
12 ErgH. p. 285.

Cercopithecus Zwischenhirn, FRIEDEMANN J. Psychol. Leipzig 18 p. 307;
petronellae sp. n. Congo, BÜTTIKOFER
Notes Mus. Jentink 34 p. 1.

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sexual characters of skull, VRAM Boll.
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n. Trengganu Archipelago, KLOSS Ann.
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BLUNTSCHLI Morph. Jahrb. 43 p. 297.

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Transvaal, Pocock Proc. Zool. Soc.
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ROBINSON & KLOSS J. Fed. Malay
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ganu Archipelago, KLOSS Ann. Mag.
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GOSSLER Anat. Hefte Wiesbaden Abt. 1
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64 148; *poliocephalus* sp. n. Tonkin,
TROUSSART Ann. Mag. Nat. Hist.
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†PARAPITHECIDAE.

Parapithecus fraasi, Schlosser, 1910,
made type of n. fam. in which
Moeripithecus should perhaps be in-
cluded, SCHLOSSER Beitr. Pal. u. Geol.
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B.—Lemuroidea.

Muskeln der Halbaffenhand, KAJAVA
No. 218.

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tions, KOLLMANN Bul. Muséum Paris
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hybrid, Pocock Proc. Zool. Soc. 1911
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n. S. Madagascar, KOLLMANN Bul.
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II.—CHIROPTERA.

Osso traverso in carpo, MILEO
Monitore zool. ital. 21 p. 318; colour-
determination, CUÉNOT Arch. Zool.
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de l'aile et patte postérieure, RETTERER
& LELIÈVRE C. R. soc. biol. 71 p. 67;
capsule surrénale, COLSON Arch. biol.
25 p. 535; corteccia cerebrale,
ZUNINO Archiv. ital. Anat. Embriol.
10 p. 145; Innervierung der Flug-
haut, ZABUSOV Kazani Trd. Obsč.
jest. 43 p. 1; of B. E. Africa ALLEN
Bull. Mus. Harvard Coll. 54 p. 321;
von Bessarabien und Podolien,
BRAUNER Kišinev Trd. Obsč. jest. 2
1 p. 22; der Höhlen Abchasiens,
SATUNIN Izv. Kavk. otd. russ. geogr.
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Cynopterus minor sp. n. Celebes, REVILLIÓD Zool. Anz. **37** p. 517.

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RHINOLOPHIDAE.

Hipposideros insolens sp. n. Borneo, LYON U. S. Nation. Mus. Proc. **40** p. 129; *ridleyi*, Singapore, ROBINSON & KLOSS J. Fed. Malay States Mus. **4** p. 241 spp. n.

Phyllorhina, Tertiary, spp., see *Rhinolophus*.

Rhinolophus ferrum-equinum colchicus, f. *euryale*, f. *nordmanni*, subspp. n., Abchasien, SATUNIN Izv. Kavk. otd. russ. geogr. Obsč. **21** pp. 47-48; (*Pseudorhinolophus*)† *antiquus* and *lugdunensis* = *Phyllorhina*, LECHER Zool. Anz. **38** p. 551

VESPERTILIONIDAE.

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†INCERTAE SEDIS.

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Skeleton, SHUFELDT Philip. J. Sci. **6** p. 139.

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(+) *savini*, (†) *runtonensis* Norfolk Forest Bed, (†) *kennardi* Pleistocene Ponder's End Middlesex, HINTON in Barrett-Hamilton's Hist. Brit. Mamm. 2 p. 80 spp. et subsp. n.

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spp. n., SCHWARZ Ann. Mag. Nat. Hist. 8 7.

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AND GLIRIDAE.

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Procavia oweni, Fouta Jalon, THOMAS Ann. Mag. Nat. Hist. ser. 8 8 p. 123; *butleri* Blue Nile, WROUGHTON t.c. p. 461; spp. n.

D.—Proboscidea.

Pankreas, MANUILOW Anat. Anz. Jena **40** p. 23; circonvolutions cérébrales, MONTANÉ & BOURDELLE Paris C. R. ass. franç. avanc. sci. **39** p. 182; structure de l'ivoire, BRANCA C. R. soc. biol. **70** p. 936.

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Elephas africanus, Verbreitung und Häufigkeit, ENGELL Petermanns geogr. Mitt. **171** p. 1; limb-arteries, ZUCKERKANDL Wien SitzBer. Akad. Wiss. **3** Abt. 120 p. 315; *a. pumilio* figured, SCHOUTEDEN Rev. Zool. Africaine **1** p. 222; *a. albertensis* in Semliki valley and Uganda, KNOWLES J. E. Africa and Uganda Nat. Hist. Soc. **2** No. 3 p. 21; †*primigenius*, sous le Sable des Landes, HARLÉ Bull. Soc. géol. France ser. 4 **10** p. 163; extinction, PRIZENMAYER Aus d. Natur **7** p. 148, HILZHEIMER t.c. p. 529; mummy, NIEZABITOWSKI Cracovie Bull. Int. Ac. Sci. 1911 p. 229; in Östpreussen, KLIEN Königsberg Schr. physik. Ges. **51** p. 47; †*planifrons*? in Low. Austrian Pliocene, SCHLESINGER Monatsbl. Ver. Landeskunde Niederöster. 1911 No. 16.

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VII.—SIRENIA AND CETACEA.

Notes on Odontoceti, MCINTOSH Zoologist ser. 4 **15** p. 81; notes on Whalebone Whales, MÖRCH Proc. Zool. Soc. 1911 p. 661; Haare, JAPHA Verh. Ges. D. Natf. Leipzig **82** p. 168; Zungenpapillen, WOLF No. 541; Anatomie und Physiologie der Nase, GRUHL Jena'sche Zs. Natw. **47** p. 867; Cetaceans, East Coast of Scotland, TAYLOR Trans. Buchan Club ser. 2 **1** p. 95; shore-whaling and science, ANDREWS Nature **88** p. 280.

Balenoptera musculus, age-phases, LYDEKKER Proc. Zool. Soc. 1911 p. 423.

Delphinapterus, see *Monodon*.

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Globicephalus melas at Mount's Bay, LYDEKKER Field **118** p. 176.

Grampus griseus, embryo, DANOIS Arch. Zool. Paris ser. 5 **8** p. 399.

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Halicore dugong, Rückenmark, DEXLER & EGER Morph. Jahrb. **43** p. 107; männliches Urogenitalsystem, RIHA t.c. p. 395.

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Kogia breviceps, cephalic anatomy, p. 149, viscera and skeleton p. 465, DANOIS Arch. zool. Paris ser. 5 **6**.

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Mesoplodon (Dioplodon) grayi, external form and skull, LYDEKKER Proc. Zool. Soc. 1911 p. 420.

Monodon and *Delphinapterus*, structure of skin, BERTELSEN København Hosp. Tid. **54** p. 537.

Orca gladiator at Skagen, HANSEN-LARSEN Dansk Fiskeritidende **2** p. 65.

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Phocaenoides g. n. p. 31 for *P. truei* sp. n. p. 32, Japan, ANDREWS Bull. Amer. Mus. Nat. Hist. **30**.

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Tursiops nuuanu sp. n. N. Pacific p. 233, *gilli* skull p. 236, ANDREWS Bull. Amer. Mus. Nat. Hist. **30**.

VIII.—EDENTATA.

Histologie, DIETRICH Intern. Monatsschr. Anat. Leipzig **28** p. 117; Classification, LANE, Science ser. 2 **31** p. 913.

Bradypodidae, Venensystem, BURLET Handl. Ned. Nat. Geneesk. Congres **13** p. 268, Leber Morph. Jahrb. **43** p. 477; testicandie, BROCK Anat. Anz. **40** p. 19.

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Dasyopus peba, septomaxillary, FUCHS Anat. Anz. **33** p. 33; *novemcinctus hoplites* subsp. n. W. Indies, ALLEN Bull. Mus. Harvard **54** p. 195.

Lepidota for Pholidota Weber, LANE Science ser. 2 **31** p. 913.

Nomarthra for Lepidota, GILL t.c. p. 56.

Scœopus torquatus, Anatomie u. systematische Stellung, POCHÉ Arch. Naturges. 1911 p. 33.

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Tooth-germs in *Macropus*, marsupial dentition, including deciduous premolar and its successor, homologous with permanent Eutherian series, HOPEWELL-SMITH & TIMS Proc. Zool. Soc. 1911 p. 926; larynx, HENKEL No. 173; Entwicklung und Ausbreitung, ARLDT Natur Leipzig **1911** p. 308.

Cœnolestes, a polyprotodont, BROOM Proc. Linn. Soc. N. S. Wales **36** p. 315.

Dasyurus, growth-changes in mammae, O'DONOGHUE Quart. J. Micr. Sci. **57** p. 187.

Didelphys, spermatogenesis, JORDAN Arch. Zellforsch Leipzig **7** p. 41.

Macropus rufus, Grosshirmmantel, HALLER Heidelberg SitzBer. Ak. Wiss. **1911** p. 37.

Marmosa ruatanica Ruatan I., Honduras, p. 237, *zeledoni* Costa Rica p. 238, spp. n., GOLDMAN Washington Proc. Biol. Soc.

Phalanger [= *Pseudochirus*] *larvatus* sp. n. Germ. New Guinea, FOERSTER & ROTHSCHILD Ann. Mag. Nat. Hist ser. 8 **7** p. 337.

†*Nototherium tasmanicum* sp. n. Pleistocene Tasmania, SCOTT Tasmanian Nat. **2** p. 60.

Phascologale lorentzii p. 234, *nouhuysii* p. 236, *naso* p. 236, spp. n., D. New Guinea, JENTINK Notes Mus. Jentink **33**.

Pseudochirus larvatus see *Phalanger larvatus*.

Sarcophilus satanicus, female genitalia, FLYNN Proc. Linn. Soc. N. S. Wales **35** p. 873.

†*Thylacoleo carnifex*, probably agent in marking bones of extinct Mammals, SPENCER & WALCOTT Victoria Proc. R. Soc. **24** p. 92.

X.—MONOTREMATA.

Ech'dna sydneyensis Sydney p. 214, *hobartensis* Hobart p. 215 spp. n., KOWARZIK Zool. Anz. **35**.

Ornithorhynchus rufus sp. n. [? nom. nud.], KOWARZIK Zool. Anz. **35** p. 215 1909.

Proechidna, subspecies KOWARZIK Zool. Anz. **35** p. 215 1909.

Zaglossus bruijnii in captivity, KERBERT Tijdschr. Ned. Dierk. Ver. ser. 2 **12** p. 34, TROUESSART La Nature **39** p. 409.

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Aarsb. Norges Fiskerier, Bergen.—Aarsberetning vedkommend Norges Fiskerier, Bergen. 2 Nor.

Aarsb. off. Foranst. Landb., Kristiania.—Aarsberetning angaaende de offentlige Foranstaltninger til Landbrugets Fremme. 1 Nor.

Abeille, Paris.—Abeille (1'). Sec. Bedel, Paris. [irrégul.] 2 Fr.

Abh. geol. Specialkarte Els.-Lothr., Strassburg.—Abhandlungen zur geologischen Specialkarte von Elsass-Lothringen. Strassburg. [2-3 H. jährl.] 1 Ger.

Acireale, Rend. Mem. Acc. Zelanti.—Rendiconti e Memorie della R. Accademia degli Zelanti, Acireale. 1 It.

Actes Muséum hist. nat., Rouen.—Actes du Muséum d'histoire naturelle. Rouen (Seine-Inférieure). [irrégul.] 5 Fr.

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Agric. litt. Mer. Noire, Novorossijsk.—1 Черноморское сельское хозяйство: органъ Сукумскаго общества сельскаго хозяйства. Новороссійскъ [Agriculture du littoral Rus. de la Mer Noir; bulletin mensuel de la Société agricole de Soukhoum-Kate, Novorossijsk]. — Rus.

Akad. Ért., Budapest.—Akademiai Értésitő, Budapest. [Akademischer Anzeiger, Budapest.] — Hun.

Akvarium, Moskva.—Акваріумъ комнатныя растенія. Сборникъ издаваемый Московскимъ Обществомъ Любителей акваріума и комнатныхъ растеній. Москва [L'aquarium et les plantes d'appartement. Recueil édité par la Société des Amateurs d'aquariums et des plantes d'appartement. Moscou]. — Rus.

Alabama, Bull. Geol. Surv. University P.O.—Bulletin of the Geological Survey of Alabama, University P.O. 1 U.S.

- Albany Univ., N.Y., Bull. St. Mus.*—Bulletin of the New York State Museum, University of the State of New York, Albany, N.Y. 4 U.S.
- Albany, N.Y., St. Educ. Dep. Mus. Bull.*—New York State Education Department, New York State Museum Bulletin, Albany, N.Y. 4 U.S.
- Albany, N.Y., St. Educ. Dept. Mus. Mem.*—New York State Education Department, New York State Museum Memoirs, Albany, N.Y. 5 U.S.
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- Albany, N.Y., Trans. Alb. Inst.*—Transactions of the Albany Institute, Albany, N.Y. 7 U.S.
- Alger, Bul. Soc. hist. nat.*—Alger, Bulletin de la Société d'histoire naturelle de l'Afrique du Nord. — Fr.
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ERRATA IN THIRD ANNUAL ISSUE.

Pt. 1, p. 233, No. 15911 and Pt. 3, p. 162, No. 543, add 136-139, 158 to the paging
Pt. 3, p. 178, delete entries 944 and 949.

INDEX TO NAMES

OF

NEW GENERA AND SUBGENERA

RECORDED IN THIS VOLUME

(INCLUDING NEW NAMES FOR GENERA PREVIOUSLY ESTABLISHED).*

- Abbella Girault* Ins. 272
Abeleses Enslin Ins. 280
Abyssiscala Bouury Moll. 75
Acachmena Turner Ins. 326
Acacicis Lea Ins. 230
Acantheurytoma Cameron Ins. 272
Acanthogonyaulax Kofoid Prot. 65
Acanthonema Grabau Moll. 63
Acanthopeltastes Enderlein Ins. 368
Acapoeta Cockerell Pisces 35
Acestridium Haseman Pisces 36
Acheilostoma Leiper Verm. 38
Acicys Turner Ins. 335
Acnodes Burr Ins. 402
Acompha Hendel Ins. 368
Acosmetira Cockerell Coel. 13
Acrimea Casey Ins. 192
Acrogoniella Schulz Ins. 262
Acropsylla Rothschild Ins. 374
Aerosaster Lambert Echin. 25
Acyclania Doggin Ins. 298
Adelina Hesse Prot. 55
Adenoschendyla Brolemann & Ribaut
 Myr., Arachn. 49
Adolenda Distant Ins. 385
Adzapala Distant Ins. 385
Aenasioidea Girault Ins. 272
Aerophiliodes Strand Ins. 266
Aerotypia Walsingham Ins. 341
Aethopia Aurivillius Ins. 232
Aethriella Schulz Ins. 262
Aetonyx Broom Rept. 31
Afroepacra Griffini Ins. 408
Agiommatus Crawford Ins. 272
Aglaopus Turner Ins. 335
Agrammodes Warren Ins. 326
Agriella Villeneuve Ins. 365
Agriodrastus Reitter Ins. 213
Agrobombus Vogt Ins. 242
Agrochira Enderlein Ins. 368
Agrotana Bethune-Baker Ins. 315
Agyneta Hull Arachn. 29
Ahrdorffia Remeš Coel. 16
Alacypha Weise Ins. 236
Alara Distant Ins. 385
Aldrichiella Hendel Ins. 368
Algeinosaurus Case Rept. 34
Alexandrella Chevreux Crust. 36
Alexandromenia Heath Moll. 62
Alisalia Casey Ins. 192
Allechinostomum Odhner Verm. 29
Allocaris Sollaud Crust. 29
Allocentrus Cameron Ins. 272
Allocotomosilis Pic Ins. 214
Allodispus Paoli Arachn. 40
Allohyllus Strand Arachn. 34
Alloiorhabdus Wolfenden Crust. 40
Allommatus Reuter Ins. 381
Allomyrina Arrow Ins. 208
Allopade Strand Ins. 272
Allophryxus Koehler Crust. 35
Alloplectus Broun Ins. 198
Allopsontus Silvestri Ins. 411
Allorhynchus Weller Brach. 7
Allotrioza Crawford Ins. 388
Alpicidaris Lambert Echin. 25
Alpiobates Verhoeff Myr., Arachn. 50.
Alriada Cameron Ins. 262
Amanimalthodes Pic Ins. 214
Amasilla Strand Arachn. 36
Amberiana Distant Ins. 376
Amblyprora Bethune-Baker Ins. 316

* The total number of names in this index is 1,841. The total last year was 2,114, and in Volume xlv, 1,820.

- Amblythrips *Bagnall* Ins. 393
 Ameladus *Sharp* Ins. 222
 Ametretus *Handlirsch* Ins. 401
 Amicocentrum *Schulz* Ins. 251
 Amiella *Walcott* Arachn. 8
 Amiskwia *Walcott* Verm. 42
 Amousus *Handlirsch* Ins. 401
 Amphiblema *Gude* Moll. 78
 Amphisbaenula *Sternfeld* Rept. 28
 Amphissites *Girty* Crust. 44
 Amphitorna *Turner* Ins. 299
 Amphoroneura *de Meyere* Ins. 368
 Amsteinia *Verhoeff* Myr., Arachn. 50
 Amynticodesmus *Silvestri* Myr., Arachn. 50
 Anablemma *Hampson* Ins. 316
 Anacantha *Row* Por. 7
 Anachastis *Meyrick* Ins. 341
 Analcina *Turner* Ins. 335
 Anaperus *v. Graff* Verm. 27
 Anathamna *Meyrick* Ins. 340
 Anaulosia *Schaus* Ins. 299
 Anchoviella *Fowler* Pisces 32
 Andersonia *Strickland* Ins. 357
 Andex *Burr* Ins. 402
 Androgynella *Cockerell* Ins. 242
 Androna *Cameron* Ins. 262
 Androya *Spaeth* Ins. 236
 Anegertus *Handlirsch* Ins. 401
 Anelus *Cook* Myr., Arachn. 50
 Anepitedius *Handlirsch* Ins. 401
 Anisembia *Krauss* Ins. 397
 Anisolabella *Zacher* Ins. 402
 Anisozyga *Prout* Ins. 327
 Anisynta *Lower* Ins. 295
 Anoplosoma *Sars* Crust. 40
 Anoploaenia *Beddard* Verm. 32
 Anorthodisca *Dognin* Ins. 327
 Anopterus *Zugmayer* Pisces 33
 Antennoeme *Hintz* Ins. 232
 Anthemiella *Girault* Ins. 272
 Anthophiura *Clark* Echin. 39
 Anthosticta *Fisher* Echin. 34
 Antichiropus *Attems* Myr., Arachn. 50
 Antisolabis *Burr* Ins. 403
 Antilogistethus *Blackburn* Ins. 213
 Antorchis *Linton* Verm. 29
 Anunda *Cameron* Ins. 262
 Anystipalpus *Berlese* Arachn. 39
 Apallaga *Strand* Ins. 295
 Aphantomartus *Pocock* Arachn. 36
 Aphelinoidea *Girault* Ins. 272
 Aphodaulacus *Kořančikov* Ins. 204
 Apicrena *Pearsall* Ins. 327
 Apithanus *Handlirsch* Ins. 401
 Aplatopterus *Reitter* Ins. 214
 Aplocidaris *Lambert & Thiéry* Echin. 25
 Apoblepta *Turner* Ins. 336
 Apodastyanax *Fowler* Pisces 33
 Apolaclaps *Silvestri* Arachn. 39
 Apomus *Cook* Myr., Arachn. 50
 Apopira *Walsingham* Ins. 342
 Apossoda *Schmidt* Ins. 385
 Aposthonia *Krauss* Ins. 397
 Apteropodon *Bruner* Ins. 409
 Aptilosia *Schaus* Ins. 299
 Apula *Boettger* Moll. 78
 Arachnoseelis *Karny* Ins. 408
 Araeoscelis *Schulz* Ins. 262
 Archa *Distant* Ins. 385
 Archaeoctonus *Pocock* Arachn. 25
 Archaeometa *Pocock* Arachn. 35
 Archaeoplecta *Gude* Moll. 78
 Archiinoceilia *Handlirsch* Ins. 399
 Archisoma *Bigelow* Coel. 13
 Arcturina *Koehler* Crust. 35
 Arcturopsis *Koehler* Crust. 35
 Arescoptera *Turner* Ins. 336
 Aressida *Cameron* Ins. 272
 Argyrodonax *Dall* Moll. 87
 Argyrogramma *Stichel* Ins. 292
 Arrhythmorhynchus *Lüke* Verm. 40
 Arianites *Arthaber* Moll. 98
 Aridionomus *Reitter* Ins. 203
 Armsia *Pilsbry* Moll. 79
 Aroui *Chevreaux* Crust. 36
 Arrhinopsis *Stappers* Crust. 36
 Arthroleptides *Nieden* Rept. 33
 Aruana *Strand* Arachn. 34
 Ascutotheca *Lesne* Ins. 217
 Asebeomyia *Aiken* Ins. 357
 Ashbyia *North* Aves 105
 Asperitas *Gude* Moll. 79
 Aspidaeglina *Holub* Arachn. 6
 Aspidobothrys *Reuter* Ins. 381
 Aspiducha *Turner* Ins. 300
 Asquamiceps *Zugmayer* Pisces 32
 Astapa *Dognin* Ins. 300
 Astenobium *Bernhauer* Ins. 192
 Asteromeyenia *Annandale* Por. 7
 Astigma *Brüyant* Arachn. 40
 Astroboa *Döderlein* Echin. 39
 Astrocaneum *Döderlein* Echin. 39
 Astrochlamys *Koehler* Echin. 39
 Astroconus *Döderlein* Echin. 39
 Astrocyclus *Döderlein* Echin. 39
 Astrodactylus *Döderlein* Echin. 39
 Astrodendrum *Döderlein* Echin. 39
 Astrogordius *Döderlein* Echin. 39
 Astroaphis *Döderlein* Echin. 40
 Astrospartus *Döderlein* Echin. 40
 Astrothorax *Döderlein* Echin. 40
 Asynceritus *Handlirsch* Ins. 401
 Atarsos *Gillette* Ins. 390
 Atelomastix *Attems* Myr., Arachn. 50
 Atelorias *Fisher* Echin. 34
 Athrinacia *Walsingham* Ins. 342
 Athyllus *Gahan* Ins. 232
 Athymodictya *Handlirsch* Ins. 401
 Atomyiodes *Ulmer* Ins. 348

- Atrachea Warren* Ins. 316
Atractopsis Despax Rept. 30
Atrichocera Aurivillius Ins. 232
Atypophthalmus Brunetti Ins. 359
Augochlorophilus Pierce Ins. 241
Aulacofoenus Kieffer Ins. 270
Austroberyx McCulloch Pisces 39
Autasterias Koehler Echin. 34
Avitellina Gough Verm. 32
Axiocleta Turner Ins. 300
Aysheaia Walcott Verm. 48

Baeocentrum Schulz Ins. 266
Balanocidaris Lambert Echin. 26
Balanosphyra Ridgway Aves 100
Balantiucha Turner Ins. 327
Balatoria Vinassa de Regny Coel. 13
Balfouria Leiper Verm. 29
Bambara Vuillet Ins. 200
Bancroftiella Johnston Verm. 32
Banffia Walcott Verm. 52
Barathrites Zugmayer Pisces 44
Barytatocephalus Schulz Ins. 262
Bathrotoma Meyrick Ins. 340
Bathyaulax Bergroth Ins. 376
Bathyglyptus Case Rept. 31
Bathymermis Daday Verm. 38
Bathysauropsis Regan Pisces 37
Batrachophthalmum Hendel Ins. 369
Bayonia Boulenger Pisces 42
Beatites Arthaber Moll. 98
Bebiosis Enderlein Ins. 394
Beckerella Enderlein Ins. 369
Belascaris Leiper Verm. 38
Belonogastechthrus Pierce Ins. 241
Benthalbella Zugmayer Pisces 33
Benthogenia Fisher Echin. 35
Berghiella Kofoid & Michener Prot. 65
Berna Friese Ins. 243
Bertoniella Rehn Ins. 408
Biphymaphorus Szépligeti Ins. 266
Birutulata Nutting Coel. 17
Bithoracochaeta Stein Ins. 365
Blackburnium Boucomont Ins. 205
Blankaartia Oudemans Arachn. 40
Blumenophilus Pic Ins. 220
Bolbapium Boucomont Ins. 205
Bolbelasmus Boucomont Ins. 205
Bolbogonium Boucomont Ins. 205
Bolborhacium Boucomont Ins. 205
Bolborhinum Boucomont Ins. 205
Bondroitia Forel Ins. 255
Bonomoia Oudemans Arachn. 43
Bootypes Boucomont Ins. 205
Boreolepus Barrett-Hamilton Mamm. 46
Bosovis Kowarzik Mamm. 47
Botha Distant Ins. 380
Bothrophorella Reuter Ins. 381
Brachistella Girault Ins. 272

Brachycampsa Gilmore Rept. 30
Brachychaeteuma Verhoeff Myr.,
 Arachn. 50
Brachycilibe Carter Ins. 218
Brachyschendyla Brölemann & Ribaut
 Myr., Arachn. 49
Brethesia Schrottky Ins. 251
Bruzeliopsis Chevreux Crust. 36
Bryogramma Schaus Ins. 317
Buethobius Chamberlin Myr., Arachn.
 49
Buliminella Cushman Prot. 51
Buliminoides Cushman Prot. 51
Bunostomum Roewer Arachn. 36
Buprestodera Picard Ins. 240

Cacops Williston Rept. 34
Cacurgus Handlirsch Ins. 401
Caenophylax Schulz Ins. 251
Caesarea Friese Ins. 243
Caesicirrus Arwidsson Verm. 48
Calammonosis Enderlein Ins. 369
Calarge Enslin Ins. 280
Calilendus Reitter Ins. 203
Calistocyrtus Ritter Ins. 412
Callidia Schulz Ins. 266
Callotillus Wolcott Ins. 217
Callulina Nieden Rept. 33
Calociasma Stichel Ins. 292
Caloecia Barnes & McDunnough Ins.
 300
Caloptilia Rohwer Ins. 280
Calvolia Oudemans Arachn. 43
Campoletis Viereck Ins. 262
Campostichommides Strand Arachn. 33
Camptolynx Cameron Ins. 262
Canada Wolcott Verm. 48
Capicola Friese Ins. 243
Caproberyx Regan Pisces 39
Cardiaspina Crawford Ins. 388
Cariomothis Stichel Ins. 292
Carliella Karny Ins. 408
Carlobruchia Spaeth Ins. 237
Carolinaia Wilson Ins. 390
Carterodema Reitter Ins. 203
Catalufa Snyder Pisces 40
Catamacta Meyrick Ins. 340
Catastylus v. Olfers Ins. 412
Catharisa Jordan Ins. 300
Caucasotachea Boettger Moll. 79
Cautoderus Sharp Ins. 223
Cavariella Guercio Ins. 390
Cavernulina Kükenthal Coel. 17
Cecidochares Bezzi Ins. 369
Cecidophaga Walsingham Ins. 342
Cedocus Jordan Ins. 231
Centrelus Cook Myr., Arachn. 50
Centrorhynchus Lühe Verm. 40
Cephalosilurus Haseman Pisces 36

- Cephalotoma *Lesne* Ins. 218
 Ceratobunellus *Roewer* Arachn. 36
 Ceratomyia *Felt* Ins. 352
 Ceratophileurus *Ohaus* Ins. 208
 Ceratopora *Hickson* Coel. 17
 Ceratostephanus *Brunetti* Ins. 359
 Cercoplasma *Roubaud* Prot. 59
 Cerithiopsida *Bartsch* Moll. 65
 Cerithiopsidella *Bartsch* Moll. 65
 Cerithiopsina *Bartsch* Moll. 65
 Cerogria *Borchmann* Ins. 220
 Ceromasiops *Townsend* Ins. 365
 Cetratus *Kulczynski* Arachn. 32
 Ceylanidrilus *Pic* Ins. 214
 Ceyxia *Girault* Ins. 273
 Chaetocladus *Kieffer* Ins. 354
 Chaetopantus *Sharp* Ins. 223
 Chagasia *Léger* Prot. 55
 Chalodeta *Stichel* Ins. 292
 Chamopsis *Reuter & Poppius* Ins. 381
 Chanystis *Meyrick* Ins. 343
 Chaprina *Distant* Ins. 385
 Charinides *Gravely* Arachn. 26
 Charmona *Stichel* Ins. 292
 Chatelainea *Cook* Myr., Arachn. 50
 Chauliopleurus *Champion* Ins. 223
 Childia *v. Graff* Verm. 27
 Chilias *Ogilby* Pisces 42
 Chilomastix *Alexeieff* Prot. 67
 Chiloxionotus *Reuter* Ins. 381
 Chimaeropsylla *Rothschild* Ins. 374
 Chionelasmus *Pilsbry* Crust. 46
 Chionobosca *Turner* Ins. 336
 Chiriscus *Richardson* Crust. 35
 Chiromeloe *Reitter* Ins. 221
 Chlorocrisia *Hampson* Ins. 301
 Chloromerus *Becker* Ins. 369
 Chloropsina *Becker* Ins. 369
 Choanocolex *La Rue* Verm. 33
 Choeromyia *Roubaud* Ins. 366
 Cholepotes *Odhner* Verm. 29
 Cholotis *Meyrick* Ins. 343
 Chondronephila *Dahl* Arachn. 30
 Chondrotheca *Lesne* Ins. 217
 Chorisoblatia *Shelford* Ins. 404
 Chrysectropa *Bethune-Baker* Ins. 301
 Chrysobyrhulus *Reitter* Ins. 203
 Chrysodiplosis *Kieffer* Ins. 352
 Chrysopiella *Banks* Ins. 349
 Chrysostephanosphaera *Scherffel* Prot. 59
 Chrysothlypis *Berlepsch* Aves 112
 Chuangia *Walcott* Arachn. 7
 Cienotromella *Canu* Bry., Brach. 17
 Cimipys *Peyerimhoff* Ins. 219
 Cirrhatulispio *M'Intosh* Verm. 48
 Cirrodiana *Hampson* Ins. 318
 Cirrothauma *Chun* Moll. 98
 Cisco *Jordan & Evermann* Pisces 33
 Cladoctonus *Strohmeyer* Ins. 230
 Claduroides *Brunetti* Ins. 359
 Cliftonia *Foerste* Brach. 7
 Clistopsenella *Kieffer* Ins. 276
 Cnestus *Sampson* Ins. 330
 Cnidostoma *Vanhöffen* Coel. 13
 Cobboldina *Leiper* Verm. 38
 Coccidomyia *Felt* Ins. 352
 Coelosoma *Anigstein* Prot. 66
 Coelalsia *Cameron* Ins. 267
 Coelomeloe *Reitter* Ins. 221
 Coelopacidia *Enderlein* Ins. 369
 Coelostephanus *Kieffer* Ins. 270
 Colobostroter *Enderlein* Ins. 369
 Colurostylis *Calman* Crust. 33
 Comadia *Barnes & McDunnough* Ins. 301
 Commolenda *Distant* Ins. 385
 Conchophrys *Chatton* Prot. 67
 Congoa *Bolívar* Ins. 410
 Conocavea *Calvet* Bry., Brach. 17
 Conocoxa *Rohwer* Ins. 280
 Conrattina *Enderlein* Ins. 369
 Constrictotermes *Holmgren* Ins. 396
 Convexitermes *Holmgren* Ins. 396
 Coosia *Walcott* Arachn. 7
 Copobathra *Meyrick* Ins. 343
 Cordylomyia *Felt* Ins. 352
 Corinthomyia *Felt* Ins. 352
 Corvospongilla *Annandale* Por. 7
 Corycella *Farran* Crust. 41
 Corynotrypa *Bassler* Bry., Brach. 17
 Coryphisoptron *Enderlein* Ins. 369
 Cosmoplatidius *Gounelle* Ins. 233
 Cotteaudia *Lambert & Thiéry* Echin. 27
 Craneopsylla *Rothschild* Ins. 374
 Craspedomerus *Bernhauer* Ins. 193
 Craterocercus *Rohwer* Ins. 280
 Craterophyllum *Barbour* Coel. 18
 Craterophyllum *Foerste* Coel. 18
 Crimalia *Casey* Ins. 193
 Cristatithorax *Girault* Ins. 273
 Crosia *Chrétien* Ins. 318
 Crossocassis *Spaeth* Ins. 237
 Crypsedra *Warren* Ins. 318
 Crypta *Fraser* Coel. 14
 Cryptarchips *Reitter* Ins. 202
 Cryptemichionaspis *Lindinger* Ins. 392
 Cryptoglena *Horváth* Ins. 383
 Cryptopthalmus *Franz* Pisces 37
 Cryptoxilos *Viereck* Ins. 267
 Ctenocidaris *Mortensen* Echin. 27
 Ctenosculum *Heath* Moll. 67
 Cubitalia *Friese* Ins. 244
 Cuculliger *v. Olfers* Ins. 412
 Cueta *Navás* Ins. 350
 Cullumanobombus *Vogt* Ins. 244
 Cupaniella *Gemmellaro* Moll. 67
 Cyanohypsa *Giamelli* Ins. 302
 Cyanomonas *Büttner* Prot. 60
 Cyanonympha *Oberholser* Aves 103

- Cyanopteridea *Viereck* Ins. 267
 Cyathocidarid *Lambert* Echin. 27
 Cyclaulax *Cameron* Ins. 267
 Cycliscus *Gude* Moll. 80
 Cyclocerus *Hintz* Ins. 233
 Cyclocormus *Cameron* Ins. 267
 Cyclometra *Clark* Echin. 44
 Cyclonautilus *Hind* Moll. 99
 Cyclophragma *Turner* Ins. 302
 Cyndroheliu *Grabau* Coel. 19
 Cyndrophalpus *Strohmeyer* Ins. 230
 Cyndropharynx *Leiper* Verm. 38
 Cyndrostyrax *Aurivillius* Ins. 233
 Cyphonephila *Dahl* Arachn. 30
 Cyrtojana *Aurivillius* Ins. 302
 Cyrtophora *Pascher* Prot. 60
 Cystotrypanosoma *Roubaud* Prot. 60
- Dabrosoma *Leu* Ins. 193
 Dacnopilio *Roewer* Arachn. 36
 Dactylanthus *Carlgrén* Coel. 19
 Dactylopodopsis *Sars* Crust. 41
 Dagnoceras *Arthaber* Moll. 99
 Daictes *Viereck* Ins. 263
 Dallatorella *Kieffer* Ins. 278
 Darvela *Schmidt* Ins. 378
 Dasychirana *Bethune-Baker* Ins. 302
 Dasymallomyia *Brunetti* Ins. 359
 Dasymetra *Nicoll* Verm. 30
 Dasymiris *Poppius* Ins. 382
 Datua *Schmidt* Ins. 385
 Dawnaria *Distant* Ins. 385
 Decasticha *Champion* Ins. 224
 Denckmannia *Wedekind* Arachn. 7
 Dendrochiton *Berry* Moll. 62
 Derocrepisomus *Pic* Ins. 237
 Desmemys *Wegner* Rept. 31
 Desmocarid *Sollaud* Crust. 30
 Desmogonius *Stephens* Verm. 30
 Desmospondylus *Williston* Rept. 32
 Desmotricha *Hampson* Ins. 302
 Diadectoides *Cass* Rept. 31
 Diadiplosis *Felt* Ins. 352
 Diaelurodon *Broom* Rept. 32
 Diasparactus *Cass* Rept. 32
 Diaspira *Soós* Moll. 68
 Diastra *Row* Por. 6
 Diastrophosternus *Gounelle* Ins. 233
 Diatrechus *Bernhauer* Ins. 193
 Dibezzia *Kieffer* Ins. 355
 Dicanestrinia *Berlese* Arachn. 43
 Diceromyia *Theobald* Ins. 357
 Dichelobius *Attems* Myr., Arachn. 49
 Dicogaster *Barnes & McDunnough* Ins. 303
 Dictyoploca *Jordan* Ins. 303
 Dictyoploca *Krauss* Ins. 397
 Didactylomyia *Felt* Ins. 352
 Dieida *Strand* Ins. 303
- Dielasmella *Weller* Brach. 7
 Dielasmoides *Weller* Brach. 7
 Dienerella *Reitter* Ins. 203
 Diexodus *Handlirsch* Ins. 401
 Digglesia *Turner* Ins. 303
 Dilla *Strand* Ins. 273
 Dilocondyla *Santschi* Ins. 257
 Dilta *Strand* Ins. 411
 Dima *Schouteden* Ins. 380
 Dimeringophrys *Enderlein* Ins. 369
 Dimetrotina *Casey* Ins. 193
 Dinaspis *Leonardi* Ins. 392
 Dinocambala *Attems* Myr., Arachn. 50
 Dinotheca *Stechow* Coel. 14
 Diozocera *Pierce* Ins. 241
 Dipachystigma *Crawford* Ins. 273
 Diplocentria *Hull* Arachn. 30
 Diplomorium *Forel* Ins. 257
 Dirofilaria *Raillet & Henry* Verm. 38
 Disaulacinus *Kieffer* Ins. 270
 Disciphus *Becker* Ins. 369
 Discogastrella *Enderlein* Ins. 369
 Discomegistus *Trägårdh* Arachn. 39
 Disholcaspis *Dalla Torre* Ins. 278
 Ditriaena *Waterhouse* Ins. 211
 Dixonina *Fowler* Pisces 32
 Djeboa *Viets* Arachn. 42
 Dolichesia *Schaus* Ins. 303
 Dolichocladius *Kieffer* Ins. 355
 Dolichogenidea *Viereck* Ins. 267
 Dolichosomina *Reitter* Ins. 215
 Dolichostyrax *Aurivillius* Ins. 233
 Dolichotrypes *Crawford & Bradley* Ins. 277
 Dolichozele *Viereck* Ins. 267
 Dorymenia *Heath* Moll. 62
 Dottia *Schaus* Ins. 303
 Draculo *Snyder* Pisces 42
 Drepanocnemis *Stein* Ins. 366
 Drepanoctonus *Pfankuch* Ins. 263
 Drepanomenia *Heath* Moll. 62
 Drepanopsis *Wolfenden* Crust. 41
 Drilosilis *Pic* Ins. 215
 Driomenia *Heath* Moll. 62
 Dromalia *Bigelow* Coel. 14
 Drouetia *Gude* Moll. 80
 Dryobotodes *Warren* Ins. 319
 Duboisia *Stremme* Mamm. 48
 Dudasia *Strand* Arachn. 35
 Durangona *Distant* Ins. 384
 Duriella *Row* Por. 8
 Durolebertia *Thor* Arachn. 42
 Dyptychosteus *Preobraženskij* Pisces 47
 Dysaethria *Turner* Ins. 328
 Dysanellus *Bernhauer* Ins. 193
 Dyscheilia *Dognin* Ins. 328
- Ea *Distant* Ins. 376
 Echinothrips *Moulton* Ins. 394

- Ecnomodes Ulmer* Ins. 348
Edentellina, Gatliff & Gabriel Moll. 90
Eirenephilus Ikonnikov Ins. 410
Eisothistes Dognin Ins. 329
Elachistocentrum Schulz Ins. 252
Elaphroconcha Gude Moll. 80
Elapocalamus Boulenger Rept. 30
Eldonia Walcott Echin. 24
Electrentomum Enderlein Ins. 395
Eledonoprius Reitter Ins. 219
Eligantiscala Boury Moll. 75
Ellobiocystis Coutière Prot. 65
Embadomonas Mackinnon Prot. 60
Emmrichella Walcott Arachn. 7
Emphytina Rohwer Ins. 280
Enapteris Rosa Verm. 49
Endoxocrinus Clark Echin. 45
Enicoderes Reitter Ins. 203
Enispades Bethune-Baker Ins. 319
Enopliolindenius Rohwer Ins. 252
Enterogonimus Hallez Verm. 27
Eoblatia Shelford Ins. 404
Eotheniza Pocock Arachn. 35
Eosia Le Cerf Ins. 303
Epagriopsis Champion Ins. 224
Epedanellus Roewer Arachn. 36
Epicarsa Crawford Ins. 389
Epiceltites Arthaber Moll. 99
Epicelyphus Becker Ins. 370
Epicerura Bethune-Baker Ins. 303
Epichorista Meyrick Ins. 340
Epideigma Handlirsch Ins. 401
Epidonta Bethune-Baker Ins. 303
Epimetra Clark Echin. 45
Epimysia Felt Ins. 352
Epirrhoeca Meyrick Ins. 340
Epitrioza Crawford Ins. 389
Erecanana Strand Arachn. 36
Eremionycha Spaeth Ins. 238
Eremopola Warren Ins. 319
Eremotermes Silvestri Ins. 396
Eresinopsides Strand Ins. 293
Eressades Bethune-Baker Ins. 303
Erichsonius Schubert Ins. 194
Eridorthis Foerste Brach. 8
Eriogyna Jordan Ins. 303
Ernestinus Distant Ins. 382
Erosomyia Felt Ins. 352
Erythromesostenus Cameron Ins. 263
Erythrometeor Cameron Ins. 267
Erythrothrips Moulton Ins. 394
Erythrothlypis Berlepsch Aves 112
Esthoniopora Bassler Bry., Brach. 17
Etelinus Jordan & Thompson Pisces 40
Eterodius Senna Ins. 231
Etoptychoptera Handlirsch Ins. 359
Ettmuelleria Oudemans Arachn. 41
Euahanes Distant Ins. 379
Eublemmara Bethune-Baker Ins. 319
Eubrachydesmus Attems Myr., Arachn. 50
Eucallimys Cockerell Ins. 364
Eucanestrinia Berlese Arachn. 43
Euchilocoris Reuter Ins. 382
Euclavellaria Enslin Ins. 281
Eucloeocerus Champion Ins. 224
Eucryptotermes Holmgren Ins. 396
Eudactylota Walsingham Ins. 343
Eudasylobus Roewer Arachn. 36
Eudasyphora Townsend Ins. 366
Eudia Jordan Ins. 304
Eudontomyzon Regan Pisces 29
Eudryoctenes Hintz Ins. 233
Eugatha Hampson Ins. 320
Eulabis Zacher Ins. 403
Eulophomonas Grassi & Foa Prot. 60
Eumantispia Okamoto Ins. 350
Eumonocentrus Schmidt Ins. 387
Eumusca Townsend Ins. 366
Eunicolina Berlese Arachn. 38
Eupachygaster Kertész Ins. 361
Euperitelus Champion Ins. 224
Eupetodromus Netolitzky Ins. 190
Euphalangium Roewer Arachn. 37
Euphastia Dognin Ins. 304
Eupragia Walsingham Ins. 343
Euproctoides Bethune-Baker Ins. 304
Eurelus Cook Myr., Arachn. 50
Eurohweria Turner Ins. 252
Eurybatodes Semenov Ins. 233
Eurymeloe Reitter Ins. 221
Euryparia Becker Ins. 370
Euryspongia Row Por. 8
Eurystrophe Gude Moll. 80
Eurystylopsis Poppius Ins. 382
Eustrigota Casey Ins. 194
Eusunoxa Enslin Ins. 281
Eutanygaster Cameron Ins. 263
Eutelipsitta Mathews Aves 98
Eutermiphora Lea Ins. 364
Eutroctes Ribaga Ins. 395
Euxenistis Warren Ins. 320
Euxinia v. Graff Verm. 27
Euxysta Townsend Ins. 366
Euzaleptus Roewer Arachn. 37
Evalljapyx Silvestri Ins. 411
Exalloniscus Stebbing Crust. 35
Exaulistis Meyrick Ins. 344
Exoneuridia Cockerell Ins. 245

Fabricia Meunier Ins. 401
Falsoanthocomus Pic Ins. 215
Falsophaeopterus Pic Ins. 215
Fanapepea Prowazek Prot. 60
Fania Barnes & McDunnough Ins. 304
Fasslia Dognin Ins. 304
Feliopsis Stremme Mamm. 40
Fergusonia Lea Ins. 225
Ficicis Lea Ins. 230
Filicollis Lühe Verm. 40

Filinota *Busck* Ins. 344
 Filiscala *Boury* Moll. 75
 Flabelloontelus *Pic* Ins. 215
 Flabellotreta *Pic* Ins. 215
 Fleischerella *Reitter* Ins. 202
 Flintia *Schubert* Prot. 52
 Fondoukia *Chrétien* Ins. 337
 Formicaleon *Banks* Ins. 350
 Formosina *Becker* Ins. 370
 Fregolia *Gounelle* Ins. 233
 Fullawayella *Del Guercio* Ins. 390
 Furcifera *Kröber* Ins. 362
 Fusalia *Casey* Ins. 194
 Fusigonyaulax *Kofoed* Prot. 65

Gaenima *Casey* Ins. 194
 Gardineria *Rathbun* Crust. 26
 Gainella *Chevreaux* Crust. 36
 Galactica *Walsingham* Ins. 344
 Galliobates *Verhoeff* Myr., Arachn. 51
 Gambiana *Distant* Ins. 376
 Gelotolabis *Zacher* Ins. 400
 Genditia *Bolívar* Ins. 410
 Georgia *Wilson* Ins. 390
 Geranosaurus *Broom* Rept. 31
 Gerarulus *Handlirsch* Ins. 401
 Gerarus *Handlirsch* Ins. 401
 Gerbathodes *Warren* Ins. 320
 Germariella *Champion* Ins. 225
 Girtyella *Weller* Brach. 8
 Glockerker *Wedekind* Arachn. 7
 Glosselus *Cook* Myr., Arachn. 51
 Glyptopleura *Girty* Crust. 45
 Gobiobotia *Kreyenberg* Pisces 35
 Godfrinia *Kieffer* Ins. 277
 Goldmania *Nelson* Aves 99
 Gonada *Busck* Ins. 344
 Goniophorus *Arrow* Ins. 206
 Gonostigmus *Rohwer* Ins. 252
 Gorhamia *Pic* Ins. 215
 Gortynodes *Bethune-Baker* Ins. 320
 Grammopeplus *Bickhardt* Ins. 201
 Grammoxyla *Aurivillius* Ins. 233
 Grantiella *Mathews* Aves 109
 Graphelysia *Hampson* Ins. 305
 Graphidura *Strand* Ins. 305
 Griffithia *Lea* Ins. 225
 Grypomys *Thomas* Mamm. 44
 Gryponyx *Broom* Rept. 30
 Gudea *Distant* Ins. 376
 Gudusia *Fowler* Pisces 32
 Guitelia *Oberthür* Ins. 234
 Gymnarthrus *Case* Rept. 32
 Gymnastes *Brunetti* Ins. 360
 Gymnoleon *Banks* Ins. 350
 Gymnothrips *Karny* Ins. 394
 Gynodiastylis *Calman* Crust. 33
 Gyronychina *Casey* Ins. 194
 Gyroprora *Turner* Ins. 320

Hackeria *Lea* Ins. 225
 Hadesia *Müller* Ins. 200
 Hadramphus *Brown* Ins. 225
 Hadromys *Thomas* Mamm. 44
 Hadrophyes *Reitter* Ins. 225
 Haemaphysa *Hampson* Ins. 305
 Hacromys *Thomas* Mamm. 44
 Hagenomyia *Banks* Ins. 350
 Halictomorpha *Schrottky* Ins. 245
 Halliella *Kieffer* Ins. 355
 Halopora *Bassler* Bry., Brach. 18
 Halomenia *Heath* Moll. 62
 Halorates *Hull* Arachn. 31
 Hamburgia *Weller* Brach. 8
 Hamidonta *Dognin* Ins. 305
 Hannemania *Oudemans* Arachn. 41
 Haplanthaxia *Reitter* Ins. 211
 Haplocadus *Odhner* Verm. 30
 Haplonerita *Hampson* Ins. 305
 Haplonodon *Griffin* Rept. 29
 Harsiesis *Fruhstorfer* Ins. 289
 Hassallius *Goldberger* Verm. 30
 Hasta *Busck* Ins. 344
 Hawaiia *Gude* Moll. 81
 Hecatasaurus *Brown* Rept. 30
 Hednophora *Meyrick* Ins. 344
 Hegesidesmus *Distant* Ins. 379
 Helenterophyllum *Grabau* Coel. 19
 Heliophrentis *Grabau* Coel. 19
 Heliorabdia *Hampson* Ins. 305
 Hemiceratoides *Strand* Ins. 320
 Hemifoenus *Kieffer* Ins. 271
 Hemigyaspis *Raymond* Arachn. 7
 Hemilychas *Hirst* Arachn. 25
 Hemimyzon *Regan* Pisces 35
 Hemiphatnus *Cameron* Ins. 263
 Hemipterois *Regan* Pisces 37
 Hemirhabdus *Wolfenden* Crust. 42
 Hemiscaphirhynchus *Berg* Pisces 31
 Hemischizus *Horváth* Ins. 381
 Hemisobium *Schmidt* Ins. 385
 Hemisphaerisoma *Becker* Ins. 370
 Hemisudra *Schmidt* Ins. 388
 Hemithea *Casey* Ins. 194
 Hemitonga *Schmidt* Ins. 385
 Hemixesta *Bergroth* Ins. 376
 Heptaglena *Horváth* Ins. 384
 Heringia *Fowler* Pisces 32
 Hermenias *Meyrick* Ins. 341
 Hermianax *Fruhstorfer* Ins. 289
 Hermias *Fruhstorfer* Ins. 289
 Herpomenia *Heath* Moll. 62
 Herpystis *Meyrick* Ins. 341
 Herrichella *Distant* Ins. 376
 Hesperocordulia *Tillyard* Ins. 400
 Hessea *Boettger* Moll. 81
 Hesydrimorpha *Strand* Arachn. 34
 Heterapis *Cockerell* Ins. 245
 Heterochinostomum *Odhner* Verm.

Heterodispus Paoli Arachn. 41
Heterogenius Moser Ins. 210
Heterokrohnia Ritter-Zahony Verm. 42
Heteromina Warren Ins. 320
Heteronitis Gillet Ins. 206
Heterostethia Moser Ins. 210
Hexachalcis Cameron Ins. 274
Hippelatinus Enderlein Ins. 371
Hispaniella Mercet Ins. 274
Hodotermopsis Holmgren Ins. 397
Holcichneumon Cameron Ins. 263
Holcophilydrus Kniz Ins. 192
Holocynips Kieffer Ins. 279
Holomastigotoides Grassi & Foa Prot. 60

Holothrips Karny Ins. 394
Homidia Strand Ins. 330
Homocidus Morley Ins. 263
Homoeolabis Borelli Ins. 403
Homogyna Le Cerf Ins. 296
Homoneomomorpha Aurivillius Ins. 234
Homotrema Hickson Prot. 52
Hoplaphthonia Schmidt Ins. 378
Hoplocheilina Canu Bry., Brach. 18
Hoplocossonus Lea Ins. 225
Hoplometroides Odhner Verm. 30
Horridolabis Zacher Ins. 403
Horvathinia Montandon Ins. 384
Hovophileurus Arrow Ins. 209
Hyalinothrix Fisher Echin. 36
Hyalobole Warren Ins. 321
Hyalocephalus Lucks Verm. 43
Hyalorhynchus Ogilby Pisces 44
Hybophorellus Schulz Ins. 263
Hyborhabdus Aurivillius Ins. 234
Hybostethus Schulz Ins. 268
Hycetiota Strand Arachn. 35
Hydroschendyla Brölemann & Ribaut Myr., Arachn. 49
Hydrotimes Kolbe Ins. 225
Hylesinosoma Lea Ins. 230
Hymenasterides Fisher Echin. 36
Hymenogaster Horváth Ins. 384
Hypalocrinus Clark Echin. 46
Hyperallus Viereck Ins. 260
Hypohylis Reitter Ins. 212
Hypomachilodes Silvestri Ins. 411
Hypsicalanus Wolfenden Crust. 42
Hypsilophus Walsingham Ins. 344
Hyptiasmus Kossack Verm. 30
Hyptiastis Meyrick Ins. 344

Ichthyocodium Jungersen Coel. 14
Ictidognathus Broom Rept. 32
Idoceras Burckhardt Moll. 100
Ilikala Pilsbry Moll. 82
Imbabura Distant Ins. 384
Inamblyderus Pic Ins. 220
Indothemis Ris Ins. 400

Inouyia Walcott Arachn. 7
Iomus Cook Myr., Arachn. 51
Iphimediella Chevreux Crust. 37
Irdex Burr Ins. 403
Irediparra Mathews Aves 93
Irodes Wilson Crust. 42
Ischnodoris Meyrick Ins. 344
Isocalanus Wolfenden Crust. 42
Isoceraspis Ohaus Ins. 207
Isochaeta Pointner Verm. 51
Isodacrys Sharp Ins. 225
Isodontiphila Pierce Ins. 241
Isodrusus Sharp Ins. 225
Isomastus Gravier Verm. 49
Isoteloides Raymond Arachn. 7
Ittys Girault Ins. 274

Jacobsonella Silvestri Ins. 194
Jaerella Richardson Crust. 34
Jalina Distant Ins. 378
Jancirona Distant Ins. 377
Japania Girault Ins. 274
Jonthodina Achard Ins. 234
Jordanidia Snyder Pisces 43

Kalendyma Gude Moll. 81
Kalidos Gude Moll. 81
Kalocrania Zacher Ins. 403
Kapunda Distant Ins. 377
Katona Schmidt Ins. 385
Katonella Schmidt Ins. 385
Kempina Roewer Arachn. 37
Kenia Preston Moll. 81
Kenocoelus Brown Ins. 198
Keraea Gude Moll. 82
Kiomonia Schmidt Ins. 386
Klebsia v. Olfers Ins. 412
Koiloskiosaurus Huene Rept. 31
Kolbeus Boucomont Ins. 206
Kolonocus Satunin Mamm. 42
Krapfiella Preston Moll. 82
Kritosaurus Brown Rept. 30
Krombia Chrétien Ins. 337
Kronomyia Felt Ins. 352
Kruegeria Schmidt Ins. 386
Kurnaina Distant Ins. 378
Kuwayama Crawford Ins. 389

Labiella Pilsbry Moll. 82
Lachnodiella Hempel Ins. 392
Laeliopsis Aurivillius Ins. 306
Laggania Walcott Echin. 24
Lambertechinus Cossman Echin. 30
Lampoidopus Esterly Crust. 42
Lamprichthys Regan Pisces 38
Lampromeloe Reitter Ins. 221
Laphriomyia Lutz Ins. 361

- Lapidariobombus *Vogt* Ins. 245
 Larex *Burr* Ins. 403
 Lasiomeloe *Reitter* Ins. 221
 Lathrocordulia *Tillyard* Ins. 400
 Latifrons *Kulczynski* Arachn. 32
 Lauterbornia *Kieffer* Ins. 355
 Lecithostaphylus *Odhner* Verm. 30
 Leeuwenhoekia *Oudemans* Arachn. 41
 Leioselia *Schaus* Ins. 321
 Lemuricedus *Jordan* Ins. 231
 Lepidodiplosis *Kieffer* Ins. 353
 Lepidosemicyclina *Rutten* Prot. 52
 Lepismodion *v. Olfers* Ins. 412
 Lepochromulina *Scherffell* Prot. 60
 Leptembia *Krauss* Ins. 397
 Leptocellodes *Ulmer* Ins. 348
 Leptococe *Rehn* Ins. 406
 Leptolipida *Bethune-Baker* Ins. 307
 Leptomesochra *Sars* Crust. 42
 Leptopeltastes *Enderlein* Ins. 371
 Leptosylla *Jordan & Rothschild* Ins. 374
 Leptotheridium *Stehlin* Mamm. 48
 Lepturichthys *Regan* Pisces 35
 Leslieomyia *Christophers* Ins. 358
 Lestodryinus *Kieffer* Ins. 277
 Leucaster *Kochler* Echin. 36
 Leucochlamys *Zugmayer* Pisces 44
 Leucodrepanilla *Strand* Ins. 307
 Leurocerus *Crawford* Ins. 274
 Levisia *Walcott* Arachn. 7
 Libyssa *Dognin* Ins. 307
 Liguriella *Issel* Moll. 100
 Limacosphaera *Simroth* Moll. 69
 Limicolariopsis *d'Ailly* Moll. 82
 Limnomermis *Daday* Verm. 39
 Liomicroneurum *Enderlein* Ins. 371
 Lionephila *Dahl* Arachn. 31
 Liothyrapis *Cockerell* Ins. 245
 Liouvillea *Chevreux* Crust. 37
 Lipogonia *Warren* Ins. 331
 Lipstorpia *Oudemans* Arachn. 44
 Lirobittium *Bartsch* Moll. 69
 Lisania *Walcott* Arachn. 7
 Lissagathis *Cameron* Ins. 268
 Lissophrymnus *Cameron* Ins. 268
 Listromeloe *Reitter* Ins. 221
 Litcupatorus *Prell* Ins. 209
 Lithanthidium *Cockerell* Ins. 245
 Lithosoma *Fisher* Echin. 36
 Lobitermes *Holmgren* Ins. 397
 Loboeceme *Rehn* Ins. 406
 Lobophilomorphus *Pic* Ins. 220
 Loczia *Vinassa de Regny* Por. 6
 Logicolabis *Zacher* Ins. 403
 Lophobrachydesmus *Attems* Myr.,
 Arachn. 51
 Lophomenia *Heath* Moll. 62
 Lophomyra *Schaus* Ins. 321
 Lophoscirtus *Brunner* Ins. 410
 Lophotagonia *Bethune-Baker* Ins. 321
 Lophotettix *Brunner* Ins. 410
 Lophothrips *Karny* Ins. 394
 Lopidolon *Poppius* Ins. 382
 Lorentzia *Cameron* Ins. 264
 Lorentzimys *Jentink* Mamm. 44
 Louisella *Walcott* Echin. 24
 Loxobathmis *Enderlein* Ins. 371
 Loxocalyx *Mortensen* Bry., Brach. 18
 Loxoporetes *Kulczynski* Arachn. 32
 Loxosomella *Mortensen* Bry., Brach. 18
 Loxotaenia *Becker* Ins. 371
 Lucasellus *Schulz* Ins. 245
 Luja *Schouteden* Ins. 380
 Lumbriclymenella *Arwidsson* Verm. 49
 Lycidocoris *Reuter & Poppius* Ins. 382
 Lycophontes *Bruch* Ins. 209
 Lyctoderma *Lesne* Ins. 218
 Lyctopsis *Lesne* Ins. 218
 Lymantriades *Bethune-Baker* Ins. 307
 Lyrischapa *Aldrich* Moll. 70
 Lysmus *Navás* Ins. 350
 Lytopsenella *Kieffer* Ins. 277
 Macara *Dognin* Ins. 307
 Machaerogenys *Emery* Ins. 258
 Machilellus *Silvestri* Ins. 412
 Machilodes *v. Olfers* Ins. 412
 Machilopsis *v. Olfers* Ins. 412
 Mackenzia *Walcott* Echin. 24
 Macrechinostomum *Odhner* Verm. 30
 Macromonycha *Spaeth* Ins. 239
 Macropsontus *Silvestri* Ins. 412
 Macrosilis *Pic* Ins. 216
 Macrosiphonella *Guercio* Ins. 390
 Maculochia *Waite* Pisces 41
 Madrasindus *Pic* Ins. 221
 Maerella *Chevreux* Crust. 37
 Magula *Fruhstorfer* Ins. 290
 Maiocercus *Pocock* Arachn. 37
 Malacanthus *Thomson* Coel. 17
 Malacopsyllus *Sars* Crust. 42
 Mangesia *Kieffer* Ins. 277
 Mapa *Strand* Ins. 345
 Marava *Burr* Ins. 403
 Margattea *Shelford* Ins. 405
 Marginellopsis *Germain* Moll. 70
 Martiniola *Horváth* Ins. 383
 Marygrande *Pesta* Crust. 30
 Mastigostoma *Meyrick* Ins. 345
 Mastrus *Viereck* Ins. 264
 Mater *Schulz* Ins. 264
 Mathewsia *Iredale* Aves 93
 Mauroniscus *Bourgeois* Ins. 216
 Mazenes *Champion* Ins. 226
 Mececyon *Stremme* Mamm. 41
 Medinoschiza *Cameron* Ins. 268
 Megadenus *Rosén* Moll. 70
 Megalostylodes *Champion* Ins. 226
 Megalothoraca *Hendel* Ins. 371

- Megaluracarus *Viets* Arachn. 43
 Megamastigias *Cockerell* Coel. 16
 Megathambus *Reitter* Ins. 212
 Megistoproctus *Schulz* Ins. 252
 Meinertomyia *Felt* Ins. 353
 Melanalia *Casey* Ins. 195
 Melanella *Wade* Crust. 45
 Melinophlebia *Handlirsch* Ins. 401
 Melissina *Cockerell* Ins. 246
 Meloegonius *Reitter* Ins. 221
 Meloencellus *Reitter* Ins. 221
 Mengenilla *Hofeneder* Ins. 241
 Merionoedopsis *Gounelle* Ins. 234
 Merisoides *Masi* Ins. 274
 Meristospira *Grabau* Brach. 8
 Merocystis *Dakin* Prot. 55
 Mesida *Kulczynski* Arachn. 31
 Mesochaeta *Stein* Ins. 367
 Mesochorella *Szépligeti* Ins. 264
 Mesocoelium *Odhner* Verm. 30
 Mesocoelus *Schulz* Ins. 252
 Mesodiomorus *Strand* Ins. 274
 Mesoeurytoma *Cameron* Ins. 274
 Mesogaidius *Wolfenden* Crust. 42
 Mesojoenia *Grassi & Foa* Prot. 61
 Mesomachilis *Silvestri* Ins. 412
 Mesomeloe *Reitter* Ins. 221
 Mesomermis *Daday* Verm. 39
 Mesomyrma *Stitz* Ins. 258
 Mesopezus *Jacobson* Ins. 216
 Mesophonus *Wills* Arachn. 25
 Mesundeuchaeta *Wolfenden* Crust. 42
 Metachanda *Meyrick* Ins. 345
 Metacoenopus *Cook* Mamm. 49
 Metadasylabus *Roewer* Arachn. 37
 Metaleptamphopus *Chevreaux* Crust. 37
 Metanastes *Arrow* Ins. 209
 Metaparagia *Meade-Waldo* Ins. 250
 Metaphalangium *Roewer* Arachn. 37
 Metaplatybunus *Roewer* Arachn. 37
 Metapone *Forel* Ins. 258
 Metasqualodon *Hall* Mamm. 50
 Metopilio *Roewer* Arachn. 37
 Michellia *Müller* Rept. 30
 Michthyops *Tattersall* Crust. 32
 Micranomala *Arrow* Ins. 208
 Micraulacinus *Kieffer* Ins. 271
 Microchlamys *Cockerell* Prot. 50
 Microcorycia *Cockerell* Prot. 50
 Microdispus *Paoli* Arachn. 41
 Micromedon *Luze* Ins. 195
 Micromeloe *Reitter* Ins. 221
 Micropa *v. Olfers* Ins. 412
 Micropoltyx *Kulczynski* Arachn. 31
 Microrhopalodina *Grassi & Foa* Prot. 61
 Microsoma *Lebedeff & Tschurnetzky*
 Prot. 57
 Microtalis *Turner* Ins. 337
 Micruracarus *Viets* Arachn. 43
 Mictophileurus *Ohaus* Ins. 209
 Midias *Wilson* Crust. 43
 Millardia *Thomas* Mamm. 44
 Mimatomus *Cockerell* Ins. 274
 Mimographopsis *Champion* Ins. 226
 Mimohammus *Aurivillius* Ins. 234
 Miodytiscus *Wickham* Ins. 191
 Miracella *Borgert* Prot. 54
 Miskoia *Walcott* Verm. 49
 Moechopsis *Hintz* Ins. 234
 Mohanga *Boulenger* Pisces 38
 Moluciba *Casey* Ins. 195
 Momacobates *Verhoeff* Myr., Arachn. 51
 Moneucoela *Dalla Torre* Ins. 279
 Mongolabis *Zacher* Ins. 403
 Mongomioides *Brunetti* Ins. 360
 Monochoerus *Löhner & Micoletzky*
 Verm. 27
 Monticellia *La Rue* Verm. 33
 Moonta *Distant* Ins. 377
 Moorefieldella *Girty* Brach. 9
 Moschops *Broom* Rept. 32
 Moseria *Ghigi* Coel. 20
 Mossa *Navás* Ins. 350
 Musakia *Strand* Ins. 264
 Musitania *Oudemans* Arachn. 41
 Mycophila *Felt* Ins. 353
 Myiagreutes *Bergroth* Ins. 380
 Myiopardalis *Bezzi* Ins. 371
 Mylacella *Enderlein* Ins. 395
 Myodopsylla *Jordan & Rothschild* Ins.
 374
 Myonotus *Fisher* Echin. 37
 Myriodon *Hoepen* Rept. 34
 Myrmecidium *Vinassa de Regny* Por. 6
 Myrmecioplana *v. Graff* Verm. 28
 Myrmicholeva *Lea* Ins. 200
 Myrmomyia *Silvestri* Ins. 364
 Myxexoristops *Townsend* Ins. 367
 Nabathaea *Spaeth* Ins. 239
 Nannodota *Hampson* Ins. 309
 Narkema *Handlirsch* Ins. 401
 Naupactopsis *Champion* Ins. 220
 Neacidiophora *Enslin* Ins. 281
 Nearchaster *Fisher* Echin. 37
 Neateuchus *Gillet* Ins. 206
 Neboda *Navás* Ins. 350
 Nectodroma *Bigelow* Coel. 15
 Nematinus *Rohwer* Ins. 281
 Nematobrycon *Eigenmann* Pisces 33
 Nemastomias *Zugmayer* Pisces 33
 Nematotrypa *Bassler* Bry., Brach. 19
 Neoblasta *Dognin* Ins. 332
 Neoblattella *Shelford* Ins. 405
 Neobuthus *Hirst* Arachn. 25
 Neocensorinus *Distant* Ins. 377
 Neocodia *Schaus* Ins. 322
 Neoconcha *Smith* Moll. 72
 Neorepidodera *Heikertinger* Ins. 239

Neodiospilus Szépligeti Ins. 269
Neofurius Reuter Ins. 382
Neogria Borchmann Ins. 220
Neomachilis Silvestri Ins. 412
Neomenestheus Distant Ins. 377
Neophlebia Navás Ins. 398
Neoptilia Rohwer Ins. 281
Neostylopyga Shelford Ins. 405
Neotabanus Ricardo Ins. 361
Neotermes Holmgren Ins. 397
Neotomicus Fuchs Ins. 230
Neotrichogramma Girault Ins. 274
Neotrimoriodes Strand Ins. 269
Neotrioza Crawford Ins. 389
Neotrioza Crawford Ins. 389
Neoturris Hartlaub Coel. 15
Neovarus Distant Ins. 380
Nepalia Kieffer Ins. 355
Nephalia Turner Ins. 338
Neptunia Barnes & McDunnough Ins. 322
Neraldus Théry Ins. 211
Nereisana Strand Ins. 309
Nesaecia Gude Moll. 82
Nesodexia Villeneuve Ins. 367
Neuranethes Bethune-Baker Ins. 322
Neuraulacinus Kieffer Ins. 271
Neureclipsa Navás Ins. 400
Neuromyia Felt Ins. 353
Neurotoma Chrétien Ins. 338
Neurybia Théry Ins. 212
Nevaya M'Intosh Verm. 50
Newsomella Foerste Moll. 95
Nicertoides Matsumura Ins. 386
Nithulea Rohwer Ins. 282
Nitor Gude Moll. 83
Noetlingia Lambert Echin. 30
Nomadosoma Rohwer Ins. 247
Nordenskjoeldaster Lambert Echin. 30
Nordenskjoeldia Wilckens Moll. 92
Nosa Navás Ins. 351
Nosora Casey Ins. 195
Nosphistica Meyrick Ins. 345
Notasterias Koehler Echin. 37
Notaulacella Enderlein Ins. 371
Notogonidea Rohwer Ins. 252
Notoplatypus Lea Ins. 230
Nubeculariella Awerintzew Prot. 53
Nullarborica Blackburn Ins. 213

Oestomorpha Walsingham Ins. 345
Ognevia Ikonnikov Ins. 410
Ohausia Schmidt Ins. 388
Ohilimia Strand Arachn. 35
Okeanus Distant Ins. 377
Olcanabates Enderlein Ins. 371
Olcella Enderlein Ins. 372
Oligocarpa Hartmeyer Proch. 4
Oligocystia Bastelberger Ins. 332
Oligocoelia Vinassa de Regny Por. 6
Ommatodema Poppius Ins. 382
Omophora v. Olfers Ins. 413
Omphix Pilsbry Moll. 83
Oncomerella Reitter Ins. 222
Oncothrips Karny Ins. 394
Onotrichus Carter Ins. 219
Onychaspidium Enderlein Ins. 372
Onychothrips Karny Ins. 394
Ooderoidea Girault Ins. 274
Ophiocrasis Clark Echin. 41
Ophiocynodus Clark Echin. 41
Ophiodiplax Koehler Echin. 41
Ophiohymen Clark Echin. 41
Ophioleptoplax Clark Echin. 41
Ophiologinus Clark Echin. 41
Ophiopenia Clark Echin. 41
Ophioperla Koehler Echin. 41
Ophiophrixus Clark Echin. 42
Ophiophrura Clark Echin. 42
Ophioschiza Clark Echin. 42
Ophiostyracium Clark Echin. 42
Ophiosyzygus Clark Echin. 42
Ophiotaenia La Rue Verm. 33
Ophiurases Clark Echin. 42
Oppenheimia Cossman Echin. 31
Ordupia Busck Ins. 345
Oreacris Bolívar Ins. 410
Orexita Spaeth Ins. 239
Orthophrys Horváth Ins. 383
Orthopnias Starks & Mann Pisces 45
Ostacronycta Bethune-Baker Ins. 323
Ostearius Hull Arachn. 31
Osteochromis Franz Pisces 41
Otaromia Aurivillius Ins. 234
Othoes Hirst Arachn. 35
Ottoia Walcott Verm. 52
Outaya Chrétien Ins. 323
Oxidus Cook Myr., Arachn. 51
Oxypteryx Rebel Ins. 345
Oxystrongylus Reitter Ins. 202

Oannes Distant Ins. 377
Oberthueria Vuillet Ins. 190
Ocellia v. Olfers Ins. 412
Ochtherisoma Becker Ins. 371
Octospora Flu Prot. 58
Odematella Hendel Ins. 371
Odontocynips Kieffer Ins. 279
Odontopelta Emery Ins. 259
Oesia Walcott Verm. 52

Pachycara Zugmayer Pisces 44
Pachymenia Heath Moll. 62
Pachymesiosilis Pic Ins. 216
Palaeochromis Sauvage Pisces 41
Palaeoglossa Cockerell Brach. 9
Palaeomachus Bather Arachn. 25
Palaeomolgopsis Boppe Ins. 235
Palaeotroctes Enderlein Ins. 395

- Palpigerida *v. Olfers* Ins. 413
 Palpigerina *v. Olfers* Ins. 413
 Pandeletinus *Champion* Ins. 227
 Pantilema *Aurivillius* Ins. 235
 Papakula *Strand* Arachn. 34
 Papuaistus *Griffini* Ins. 409
 Papuana *Arrow* Ins. 209
 Papuliscala *Boury* Moll. 75
 Parabacillus *Schulthess-Rechberg* Ins. 406
 Parabarbus *Franz* Pisces 34
 Parabrosoma *Giglio-Tos* Ins. 406
 Parabrotula *Zugmayer* Pisces 44
 Parabrunettia *Brunetti* Ins. 358
 Paracassidina *Baker* Crust. 34
 Paracinetia *Collin* Prot. 67
 Paraclada *Meyrick* Ins. 345
 Paracladura *Brunetti* Ins. 360
 Paraclunio *Kieffer* Ins. 355
 Paracotyle *Johnstone* Verm. 31
 Paradiplatys *Zacher* Ins. 403
 Parafoenus *Kieffer* Ins. 271
 Parageter *Bethune-Baker* Ins. 310
 Paragobioides *Kendall & Goldsborough* Pisces 43
 Paragoceras *Arthaber* Moll. 101
 Paraguaya *Girault* Ins. 274
 Parahippelates *Becker* Ins. 372
 Parajalla *Distant* Ins. 377
 Parajoenia *Grassi & Foa* Prot. 61
 Paralebion *Wilson* Crust. 43
 Paralecithodendrium *Odhner* Verm. 31
 Paralepidiota *Blackburn* Ins. 207
 Paralincus *Distant* Ins. 377
 Paralineus *Schütz* Verm. 34
 Paraliodes *Hall* Arachn. 39
 Paralogopsis *Handlirsch* Ins. 401
 Paralophata *Bethune-Baker* Ins. 323
 Paramaenas *Grünberg* Ins. 323
 Paramicrixia *Distant* Ins. 386
 Paramongoma *Brunetti* Ins. 360
 Paramyostoma *Villeneuve* Ins. 367
 Paramysia *Reitter* Ins. 241
 Paramyxa *Chatton* Prot. 58
 Paraneurotelia *Landrock* Ins. 354
 Paranoea *Walsingham* Ins. 346
 Paranthrenopsis *Le Cerf* Ins. 296
 Paraoligosita *Kurdjumov* Ins. 274
 Paraperiscyphis *Stebbing* Crust. 35
 Parapirga *Bethune-Baker* Ins. 310
 Paraplasma *Seidelin* Prot. 57
 Paraplectra *Bethune-Baker* Ins. 310
 Parapneustes *Koehler* Echin. 31
 Paraproctis *Bethune-Baker* Ins. 310
 Parapsectris *Meyrick* Ins. 346
 Pararagmus *Poppins* Ins. 383
 Pararhopaea *Blackburn* Ins. 207
 Pararhyssalus *Cameron* Ins. 269
 Parascyphus *Ritchie* Coel. 15
 Parasiopsis *Bethune-Baker* Ins. 323
 Parasomus *Sharp* Ins. 227
 Parasparatta *Burr* Ins. 403
 Parasperina *Cameron* Ins. 274
 Parasqualodon *Hall* Mamm. 50
 Parastaria *Kiritshenko* Ins. 377
 Parasubria *Karny* Ins. 409
 Parasudis *Regan* Pisces 37
 Parasyzygonia *Rohwer* Ins. 282
 Paratendipes *Kieffer* Ins. 355
 Parateneriffia *Thor* Arachn. 41
 Paratirolites *Stoyanow* Moll. 101
 Parautenoglanis *Boulenger* Pisces 35
 Paraxena *Bethune-Baker* Ins. 310
 Paraxenetus *Reuter* Ins. 383
 Paraxenopygus *Bernhauer* Ins. 196
 Parazana *Bethune-Baker* Ins. 310
 Parazarca *Rohwer* Ins. 282
 Parcella *Stichel* Ins. 292
 Pardaliscopsis *Chevreaux* Crust. 37
 Parectatomma *Emery* Ins. 259
 Parepimeria *Chevreaux* Crust. 37
 Pareuplexia *Warren* Ins. 323
 Pariospilus *Viguiet* Verm. 50
 Paropilio *Roewer* Arachn. 38
 Paroxyopsis *Rehn* Ins. 407
 Parunciola *Chevreaux* Crust. 37
 Paryphodes *Speiser* Ins. 372
 Pauahia *Pilsbry* Moll. 82
 Paurophlebia *Dognin* Ins. 332
 Paurophlebs *Dognin* Ins. 332
 Paussopsis *Cockerell* Ins. 191
 Pectusa *Casey* Ins. 196
 Pelethiphis *Berlese* Arachn. 39
 Peliolopisma *Ritter* Ins. 413
 Pelopsis *Hall* Arachn. 39
 Pelotretis *Waite* Pisces 45
 Pentanotaulax *Enderlein* Ins. 372
 Pentozoe *Pierce* Ins. 241
 Peradenina *Distant* Ins. 386
 Percanestrinia *Berlese* Arachn. 43
 Pericalyphe *Handlirsch* Ins. 401
 Pericomus *Burr* Ins. 404
 Peridiniella *Kojoid & Michener* Prot. 66
 Perikaryon *Chatton* Prot. 67
 Peritroctes *Ribaga* Ins. 395
 Petrocrania *Raymond* Brach. 9
 Phacusosia *Hampson* Ins. 311
 Phaenochitonia *Stichel* Ins. 292
 Phagus *Wilson* Crust. 43
 Phaioccia *Dyar* Ins. 323
 Phanopsyche *Banks* Ins. 348
 Pharia *Fruhstorfer* Ins. 290
 Pharyngora *Lebour* Verm. 31
 Pheropsophidius *Hubenthal* Ins. 190
 Phocaenoides *Andrews* Mamm. 50
 Photodotis *Meyrick* Ins. 346
 Phra *Distant* Ins. 386
 Phriectidea *Bolivar* Ins. 409
 Phyllothripsolus *Strand* Ins. 394

- Phyllyctus Lesne* Ins. 218
Phymapatagus Lambert Echin. 31
Physomeloe Reitter Ins. 221
Pikaia Walcott Verm. 52
Pilodonta Dognin Ins. 311
Piramura Distant Ins. 378
Pityokteines Fuchs Ins. 230
Placochelys Jaekel Rept. 32
Plagiopsetta Franz Pisces 45
Plagiorhynchus Lühe Verm. 40
Planamastra Pilsbry Moll. 83
Planitermes Holmgren Ins. 397
Planodiplosis Kieffer Ins. 353
Plastibalia Kieffer Ins. 279
Platactis Meyrick Ins. 346
Platensina Enderlein Ins. 372
Platyaxum Foerste Coel. 20
Platybathra Meyrick Ins. 346
Platyberyx Zugmayer Pisces 39
Platycilibe Carter Ins. 219
Platycopia Sars Crust. 43
Platymylaris Handlirsch Ins. 405
Platysilurus Haseman Pisces 36
Platyspathius Viereck Ins. 269
Pleciomyia Brunetti Ins. 359
Plectostenus Lea Ins. 199
Plesiophyle Dognin Ins. 333
Plesiosiro Pocock Arachn. 38
Pleurocaris Calman Crust. 32
Pleuroschendyla Brölemann & Ribaut
 Myr., Arachn. 49
Pleurostomellina Schubert Prot. 53
Pleurotrochus Grabau Moll. 73
Plinthurgus Kiritschenko Ins. 379
Plistospilota Giglio-Tos Ins. 407
Plumana Busch Ins. 346
Plutofoenus Kieffer Ins. 271
Podykipus Attems Myr., Arachn. 51
Poecilomyia Hendel Ins. 372
Poecilonephila Dahl Arachn. 31
Poecilospondylus Case Rept. 32
Pogonoptera Turner Ins. 338
Pogonortalis de Meyere Ins. 372
Polemochartus Schulz Ins. 269
Polemophthorus Schulz Ins. 265
Pollingeria Walcott Verm. 50
Polydrosodes Champion Ins. 228
Polymorphus Lühe Verm. 40
Polyochodes Chrétien Ins. 338
Polystenidea Viereck Ins. 269
Polystylus v. Olfers Ins. 413
Pomeria Barnes & McDunnough Ins.
 311
Pontioceramus Fisher Echin. 37
Poppiella Bergroth Ins. 383
Poromecyna Aurivillius Ins. 235
Poromitrella Zugmayer Pisces 39
Praebekalia Rathbun Crust. 27
Pratobombus Vogt Ins. 247
Prenekites Arthaber Moll. 102
Priamaster Koehler Echin. 37
Prionoryctes Arrow Ins. 209
Prionoscelus Becker Ins. 372
Pristomyrmecia Emery Ins. 260
Proanita Dognin Ins. 311
Probassariscus Merriam Mamm. 41
Procarnites Arthaber Moll. 102
Prochloridea Barnes & McDunnough
 Ins. 324
Prochroptera Handlirsch Ins. 402
Proclesis Walsingham Ins. 346
Procoronis Meyrick Ins. 341
Proctoecus Odhner Verm. 31
Proctophantastes Odhner Verm. 31
Proctotrema Odhner Verm. 31
Proctotydaeus Berlese Arachn. 41
Prodromopsis Poppius Ins. 383
Progonarma Meyrick Ins. 346
Prolabia Burr Ins. 404
Prolymnia Hampson Ins. 324
Promastax Handlirsch Ins. 410
Promecopharus Sicard Ins. 241
Promikiola Kieffer Ins. 353
Promyrmecia Emery Ins. 260
Proneurmes Holmgren Ins. 397
Proparuterina Fuhrmann Verm. 33
Protrifrons Barnes & McDunnough Ins.
 312
Proschizophoria Maillicux Brach. 9
Prosevania Kieffer Ins. 271
Prosomphax Warren Ins. 333
Prosparatta Burr Ins. 404
Prosserella Grabau Brach. 9
Prosynapsis Dalla Torre Ins. 279
Protargionia Leonardi Ins. 393
Protelmis Grouvelle Ins. 204
Proterogynotaenia Fuhrmann Verm.
 34
Protinopalpa Strand Ins. 338
Protinopalpella Strand Ins. 338
Protomiris Poppius Ins. 383
Protopecten Hind Moll. 95
Protopheropsophus Hubenthal Ins. 190
Protrichomonas Alexeieff Prot. 61
Protropites Arthaber Moll. 102
Provampyrops Schlosser Mamm. 39
Prowinnertzia Kieffer Ins. 353
Psammobuthus Birula Arachn. 26
Psammolestes Bergroth Ins. 380
Psecadius Alluaud Ins. 190
Pselaphia Becker Ins. 372
Pseudabatus Koehler Echin. 32
Pseudacroleptus Pic Ins. 216
Pseudameira Sars Crust. 43
Pseudanilara Théry Ins. 212
Pseudarctia Bethune-Baker Ins. 312
Pseudartiocotylus Ikeda Verm. 28
Pseudechiniscus Thulin Arachn. 44
Pseudechinostomum Odhner Verm. 31
Pseudeustylus Champion Ins. 228

Pseudhaloptilus Wolfenden Crust. 43
Pseudoholophylla Blackburn Ins. 207
Pseudhypoptus Champion Ins. 228
Pseudibalia Kieffer Ins. 279
Pseudoacirsa Boury Moll. 75
Pseudobanchus Szépligeti Ins. 265
Pseudobebaeus Distant Ins. 377
Pseudobiantes Hirst Arachn. 38
Pseudocamptobrochis Poppius Ins. 383
Pseudochloritis Boettger Moll. 84
Pseudocnemodus Barber Ins. 379
Pseudocollodes Rathbun Crust. 26
Pseudocyphona Rohwer Ins. 282
Pseudoeriopsylla Newstead Ins. 389
Pseudokaliella Godwin-Austen Moll. 84
Pseudoleguminaia Germain Moll. 95
Pseudoleptus Bryant Arachn. 41
Pseudomantria Bethune-Baker Ins. 312
Pseudometyrus Lea Ins. 228
Pseudontaster Koehler Echin. 37
Pseudopachymesia Pic Ins. 216
Pseudopalaemon Sollaud Crust. 30
Pseudopantomorus Champion Ins. 228
Pseudopolygraphus Seitner Ins. 231
Pseudosilis Pic Ins. 216
Pseudosirenites Arthaber Moll. 102
Pseudosoloe Bethune-Baker Ins. 312
Pseudotachea Boettger Moll. 84
Pseudotaphroderes Bolkey Ins. 231
Pseudotriphleps Poppius Ins. 381
Pseudotrichonympha Grassi & Foa Prot. 61
Pseudoxerotracha Boettger Moll. 84
Pseudoxiphydria Enslin Ins. 282
Psichion Gude Moll. 84
Psilaulacus Kieffer Ins. 271
Psilochaeta Stein Ins. 367
Psorthaspis Banks Ins. 253
Psychogena Schaus Ins. 312
Ptenolasia Enderlein Ins. 395
Pterikrypta Ritter Ins. 413
Pternidora Meyrick Ins. 341
Pteronidea Rohwer Ins. 282
Pterotermes Holmgren Ins. 397
Pterygomotopidella Wedekind Arachn. 8
Ptilonina Enderlein Ins. 373
Ptilostonychia Walsingham Ins. 346
Pugnoides Weller Brach. 10
Pulvilligera Strand Ins. 275
Purex Burr Ins. 404
Pycnadena Linton Verm. 31
Pycnosteus Preobraženskij Pisces 47
Pydnaodes Hampson Ins. 312
Pygiopachymerus Pic Ins. 236
Pygmodisus Paoli Arachn. 41
Pyrochroella Reitter Ins. 222
Pyromys Thomas Mamm. 45
Pythis Champion Ins. 228

Quetieria Viguiet Verm. 50

Rallicola Johnston & Harrison Ins. 395
Rambesilis Pic Ins. 216
Rebmanniella Preston Moll. 82 — do
Rediviva Friese Ins. 248
Reedia Wedekind Arachn. 8
Regimbartia Chatanay Ins. 191
Remartinia Navás Ins. 400
Rexea Waite Pisces 43
Rhabdechinus Lambert Echin. 32
Rhabdoria Hull Arachn. 31
Rhadinopimpla Schulz Ins. 265
Rhadinorhynchus Lühe Verm. 40
Rhadinoscopus Kolbe Ins. 228
Rhamdiopsis Haseman Pisces 36
Rhathymodes Turner Ins. 312
Rhexanella Stebbing Crust. 34
Rhizomastix Alexeieff Prot. 61
Rhodeota Casey Ins. 196
Rhodesia Distant Ins. 379
Rhodothemis Ris Ins. 400 — do ✓
Rhodotrema Odhner Verm. 31 — do ✓
Rhombophylla Turner In. 334
Rhombunio Germain Moll. 95
Rhopalocladius Kieffer Ins. 356
Rhopalotella Bernhauer Ins. 196
Rhopalotoma Cameron Ins. 269
Rhyncholepta Bergroth Ins. 377
Rhyncholimnophora Stein Ins. 367
Rhynchotetra Weller Brach. 10
Riella Kieffer Ins. 277
Riveraella Kieffer & Herbst Ins. 275
Rivulana Bethune-Baker Ins. 324
Robigus Distant Ins. 386
Rodolphia Le Cerf Ins. 296
Rodwayia Cameron Ins. 265
Rohaultia Oudemans Arachn. 41
Rotunditermes Holmgren Ins. 397
Rowleyella Weller Brach. 10
Rugitermes Holmgren Ins. 197
Rusulus Starks & Mann Pisces 45
Ruthvenia Gude Moll. 84

Sabaudia Ghigi Coel. 20
Sacandaga Alexander Ins. 360
Saccactis Lager Coel. 20
Sagocoris Montandon Ins. 384
Salatigia Enslin Ins. 282
Salpingellus Reitter Ins. 222
Samichus Attems Myr., Arachn. 52 X
Sanazarius Distant Ins. 379
Sangiria Horst Verm. 50
Saphobethylus Kieffer Ins. 277
Saphoncerus Dalla Torre Ins. 279
Sarcotretes Jungersen Crust. 43
Saturniodes Jordan Ins. 313 — do ✓
Scalmatica Meyrick Ins. 346

Scepasma Handlirsch Ins. 402
Sceptea Walsingham Ins. 346
Schalidomitra Strand Ins. 313
Schellwienella Thomas Brach. 10
Schemastis Meyrick Ins. 346
Scherffelia Pascher Prot. 62
Schizonema Foerste Brach. 10
Schizotrema Calman Crust. 33
Schroederia Schmidt Ins. 378
Schroetteria Reitter Ins. 221
Schuchertiella Handlirsch Ins. 402
Schultzicrinus Springer Echin. 47
Sciadrusus Sharp Ins. 228
Sciomas Sharp Ins. 228
Scleropilio Roewer Arachn. 38
Sclerotettix Bruner Ins. 410
Scopeloberyx Zugmayer Pisces 39
Scotinella Banks Arachn. 33
Sediantha Lea Ins. 229
Selandridea Rohrer Ins. 282
Selenometra Clark Echin. 47
Selenothrips Karny Ins. 394
Selkirkia Walcott Verm. 50
Semaranga Becker Ins. 373
Serpulopsis Girty Verm. 50
Sesarmaxenos Annandale Crust. 47
Setellida Hendel Ins. 373
Setosicornia Pic Ins. 221
Shumardella Weller Brach. 10
Sibiriobombus Vogt Ins. 248
Sibogella Billard Coel. 15
Sidneyia Walcott Arachn. 8
Sieboldiellina Collin Prot. 67
Silavoga Cameron Ins. 265
Silphion Handlirsch Ins. 402
Silvanoprus Reitter Ins. 203
Silvanopsis Reitter Ins. 203
Similipepsis Le Cerf Ins. 297
Simoneura Walsingham Ins. 346
Simpsonia Baker Moll. 84
Sipaliella Casey Ins. 196
Sitalcina Banks Arachn. 38
Socarnopsis Chevreux Crust. 37
Sogra Navás Ins. 351
Sonomota Casey Ins. 196
Sophencyrtus Crawford Ins. 275
Soroensibombus Vogt Ins. 248
Spaniometra Kossack Verm. 32
Speiroceras Chretien Ins. 339
Spelaeonebria Peyerimhoff Ins. 191
Speophilus Jeannel Ins. 200
Speoplanes Müller Ins. 200
Sphaerotrichopus Attems Myr., Arachn. 52
Spheneuolena Hendel Ins. 373
Sphenocassis Spaeth Ins. 239
Sphyrnecotaenia Ransom Verm. 34
Spilomastax Handlirsch Ins. 402
Spilomicrodus Cameron Ins. 269
Spiraulax Kofoid Prot. 66

Spirocystis Léger & Duboscq Prot. 49
Spongovostox Burr Ins. 404
Sporadarthra Meyrick Ins. 346
Sporadotrema Hickson Prot. 53
Staphylocystis Coutière Prot. 66
Stegerhynchus Foerste Brach. 11
Steirarrhinus Champion Ins. 229
Stemagoris Meyrick Ins. 347
Stenocolletes Schrottkey Ins. 248
Stenoderistella Reitter Ins. 221
Stenopleura Viereck Ins. 269
Stenoponia Jordan & Rothschild Ins. 375
Stenostigma Warren Ins. 325
Stephanonympha Janicki Prot. 62
Stephanopsylla Rothschild Ins. 375
Stephanoteuthis Berry Moll. 103
Steringotrema Odhner Verm. 32
Steriphotis Meyrick Ins. 341
Sternotomiella Aurivillius Ins. 235
Stilbobezzia Kieffer Ins. 356
Stireurytoma Cameron Ins. 275
Stirojoppa Cameron Ins. 265
Stiromesostenus Cameron Ins. 265
Stiropius Cameron Ins. 269
Stirotarsus Bergroth Ins. 378
Strabocephalum Bernhauer Ins. 197
Stromactinia Vinassa de Regny Coel. 15
Stromboceridia Rohrer Ins. 282
Strombopugnellus Koch Moll. 75
Strongylolasius Reitter Ins. 202
Stylobrachydesmus Attems Myr., Arachn. 52
Stylonotus v. Olfers Ins. 413
Styphlotrema Odhner Verm. 32
Subterraneobombus Vogt Ins. 248
Subulitermes Holmgren Ins. 397
Sumangala Distant Ins. 386
Supella Shelford Ins. 405
Sylphidia Le Cerf Ins. 297
Synaptacella Mapleston Bry., Brach. 20
Syngambria Spaeth Ins. 239
Synixais Aurivillius Ins. 236
Synsiphonium Hallez Verm. 28
Syntonoptera Handlirsch Ins. 402
Sypharoptera Handlirsch Ins. 402
Syrhaema Dognin Ins. 335
Szepligetia Schulz Ins. 254

Tabernillaia Walsingham Ins. 347
Tacheopsis Boettger Moll. 85
Tachidiopsis Sars Crust. 43
Tachyptera Barnes & McDunnough Ins. 314
Tachytixenus Pierce Ins. 241
Takaoia Roewer Arachn. 38
Talacalanus Wolfenden Crust. 43
Talorga Cameron Ins. 265

- Tambourina *Distant* Ins. 378
 Tanyethira *Turner* Ins. 339
 Taphromeloe *Reitter* Ins. 221
 Taphrosphilus *Simon* Aves 99
 Tapoosa *Distant* Ins. 386
 Taprobanus *Distant* Ins. 379
 Tarsopolipus *Berlese* Arachn. 41
 Tavaresiella *Guercio* Ins. 391
 Teleutochaeta *Stein* Ins. 368
 Telorta *Warren* Ins. 325
 Temoropsis *Wolfenden* Crust. 44
 Teneriffia *Thor* Arachn. 41
 Teneriffiola *Strand* Arachn. 41
 Teratembia *Krauss* Ins. 397
 Teratocapsus *Poppius* Ins. 383
 Termitella *Wasmann* Ins. 197
 Termitolinus *Wasmann* Ins. 197
 Termitopaedia *Wasmann* Ins. 197
 Termitoptochus *Silvestri* Ins. 197
 Termophila *Lea* Ins. 197
 Terrestribombus *Vogt* Ins. 248
 Tersenius *Case* Rept. 34
 Tessarabrachion *Hansen* Crust. 32
 * Tessinosoma *Verhoeff* Myr., Arachn. 52
 Tetracamera *Weller* Brach. 11
 Tetragnomus *Champion* Ins. 229
 Tetralina *Casey* Ins. 197
 Tetrapolipus *Berlese* Arachn. 41
 Tetraulacinus *Kieffer* Ins. 271
 Textiscala *Boury* Moll. 75
 Textularioides *Cushman* Prot. 54
 Thaanumia *Pilsbry* Moll. 82
 Thalassoerinus *Clark* Echin. 47
 Thamiras *Champion* Ins. 229
 Thapsiella *Gude* Moll. 85
 Thaumasiochaeta *Stein* Ins. 368
 Thaumatoctyle *Odner* Verm. 32
 Theliopsyche *Banks* Ins. 349
 Thienemanniella *Kieffer* Ins. 356
 Thierychinus *Lambert* Echin. 33
 Thomassetia *Hirst* Arachn. 33
 Thomasina *Newstead & Carter* Ins. 358
 Thoracotermes *Wasmann* Ins. 397
 Thotmus *Brown* Ins. 229
 Thripoctenus *Crawford* Ins. 276
 Thygatina *Cockerell* Ins. 249
 Thylacopsis *Enderlein* Ins. 395
 Thyridula *Becker* Ins. 373
 Thysanotaenia *Beddard* Verm. 34
 Tilurella *Roule* Pisces 37
 Tiluropsis *Roule* Pisces 37
 Tioloma *Strand* Ins. 282
 Toba *Schmidt* Ins. 388
 Toddia *França* Prot. 55
 Tolmerus *Bernhauer* Ins. 197
 Topomesoides *Strand* Ins. 314
 Torbinia *Spaeth* Ins. 240
 Toronia *Barnes & McDunnough* Ins. 314
 Tortonia *Oudemans* Arachn. 44
 Toxascaris *Leiper* Verm. 40
 Toxometra *Clark* Echin. 47
 Toxomyia *Felt* Ins. 353
 Trachymesopus *Emery* Ins. 261
 Trachypharynx *Leiper* Verm. 40
 Trachyphloeomimus *Champion* Ins. 229
 Trachyptena *Bethune-Baker* Ins. 314
 Tremogasterina *Canu* Bry., Brach. 20
 Tretothorax *Lea* Ins. 202
 Triadocodia *Vinassa de Regny* Por. 6
 Triaenura *v. Olfers* Ins. 413
 Trichaspis *Spaeth* Ins. 240
 Trichempheria *Enderlein* Ins. 395
 Trichiopsis *Boettger* Moll. 85
 Trichocncha *Smith* Moll. 75
 Trichogrammatella *Girault* Ins. 276
 Trichogrammatoidea *Girault* Ins. 273
 Trichomeloe *Reitter* Ins. 221
 Trichonephila *Dahl* Arachn. 32
 Trichonotulus *Bedel* Ins. 206
 Trichostomias *Zugmayer* Pisces 33
 Trigomphus *Bartenev* Ins. 401
 Trigonofoenus *Kieffer* Ins. 271
 Trigonomma *Enderlein* Ins. 374
 Trigonotarus *Pocock* Arachn. 38
 Trimastigamoeba *Whitmore* Prot. 50
 Triophora *Meyrick* Ins. 347
 Triozoida *Crawford* Ins. 389
 Trisodontophyes *Enslin* Ins. 282
 Trissandricus *Kieffer* Ins. 279
 Trisulana *Bethune-Baker* Ins. 325
 Tritaxilina *Cushman* Prot. 54
 Trophoessa *Turner* Ins. 339
 Tropidiopsis *Bolivar* Ins. 411
 Tropidosciniis *Enderlein* Ins. 374
 Trumanda *Dognin* Ins. 314
 Trumechinus *Lambert & Thiéry* Echin. 34
 Trybomia *Karny* Ins. 394
 Trypauchenophrys *Franz* Pisces 43
 Tumidiacirsa *Boury* Moll. 75
 Tumidiclava *Girault* Ins. 276
 Tumidicoxa *Girault* Ins. 276
 Tumidifemur *Girault* Ins. 276
 Tumidiscapus *Girault* Ins. 276
 Turrana *Distant* Ins. 378
 Turtonia *Rosén* Moll. 76
 Tylocerocorneus *Pic* Ins. 217
 Tylonereis *Farvel* Verm. 51
 Typomys *Thomas* Mamm. 45
 Ufens *Girault* Ins. 276
 Ulododerus *Gounelle* Ins. 236
 Ulolendus *Reitter* Ins. 203
 Unciolella *Chevreaux* Crust. 38
 Urapterydia *Oberthür* Ins. 335
 Urios *Girault* Ins. 276
 Ursia *Barnes & McDunnough* Ins. 314
 Uscana *Girault* Ins. 276

Uscanella *Girault* Ins. 276
 Uscanoidea *Girault* Ins. 276
 Uzeiliella *Poppius* Ins. 383

Valcourea *Raymond* Brach. 11
 Valoga *Cameron* Ins. 265
 Vampyrelloides *Schepotieff* Prot. 50
 Vandex *Burr* Ins. 404
 Variatipes *Paoli* Arachn. 42
 Verhoeffiella *Zacher* Ins. 404
 Vesiculaphis *Del Guercio* Ins. 391
 Vicinocerithium *Wood* Moll. 77
 Villania *Till* Moll. 103
 Vincenzellus *Reitter* Ins. 222
 Vogdesia *Raymond* Arachn. 8
 Vostox *Burr* Ins. 404

Watobius *Chamberlin* Myr., Arachn. 50 ✓
 Winnemana *Crawford* Ins. 276
 Withius *Kew* Arachn. 36
 Wiwaxia *Walcott* Verm. 51
 Woodsholia *v. Graff* Verm. 28
 Worthenella *Walcott* Verm. 51

Xanthomicrogaster *Cameron* Ins. 270
 Xenacalles *Brown* Ins. 229
 Xenentodon *Regan* Pisces 38
 Xenocynips *Kieffer* Ins. 279
 Xenodiplosis *Felt* Ins. 353
 Xenolobus *Cameron* Ins. 270
 Xenopoecilus *Regan* Pisces 38
 Xenosternus *Bickhardt* Ins. 202
 Xiphonycteris *Dollman* Mamm. 39
 Xyalosema *Dalla Torre* Ins. 279
 Xylitella *Reitter* Ins. 220
 Xylophageuma *Verhoeff* Myr., Arachn. 52
 Xystodus *Ogilby* Pisces 37

Zaga *Girault* Ins. 276
 Zaleptopygus *Viereck* Ins. 266
 Zamenhofia *Vuillet* Ins. 201
 Zantethobius *Chamberlin* Myr., Arachn. 50
 Zelosyne *Walsingham* Ins. 347
 Zeugonephila *Dahl* Arachn. 32
 Zophos *Gude* Moll. 86
 Zouza *Strand* Ins. 407

